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ABSTRACT

More than half of the world's population, and more than 70 percent of the world's poor live in rural areas where hunger, illiteracy, and low school achievement are common. Education in rural areas is crucial for achieving sustainable development. The Food and Agriculture Organization (FAO) of the United Nations and UNESCO's International Institute for Educational Planning recently completed a comprehensive international study of education for rural development, focusing on constraints to achieving Education for All (EFA) in rural areas, improving educational access and quality, and strengthening the links between education and rural development. To continue this discourse, a seminar involving nine Asian countries was held in Bangkok in November 2002. Panel presentations and plenary discussions focused on five themes: addressing rural challenges to EFA, enhancing food security through education and training, the role of education in targeting rural poverty, changes in rural labor markets, and the impact on education of HIV/AIDS in rural areas. This proceedings summarizes sessions on each theme; presents group findings on rural community participation in local development, experiences in multisectoral coordination and programs, and approaches to institutional change; and includes five selected contributions. These are: (1) "Contributions of Education to Alleviating Rural Poverty" (Yu Fuzeng); (2) "Supporting Rural Education for Poverty Reduction: Issues and Approaches" (Chris A. Spohr); (3) "Responding to the Transformation of Rural Labour Markets: Implications for Education and Training" (Samuel T. Mancebo); (4) "Landcare in the Philippines: Developing Capacities of 'Farmers of the Future' and Their Communities" (Tom Vandenbosch); and (5) "Food for Education and Rural Development" (Anette Haller). A seminar program and lists of participants and papers presented are included. (SV)

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EDUCATION FOR RURAL DEVELOPMENT IN ASIA

Experiences and policy lessons

FAO/UNESCO seminar
Bangkok, Thailand
5-7 November 2002

Food and Agriculture Organisation of the United Nations, Rome, Italy and FAO Regional Office, Bangkok, Thailand

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International Institute for Educational Planning, Paris, France and the UNESCO Asia and Pacific Regional Bureau for Education, Bangkok, Thailand

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Education for rural development in Asia: experiences and policy lessons

FAO/UNESCO Seminar

5-7 November 2002
Bangkok, Thailand

Paris, 2002
UNESCO: International Institute for Educational Planning

The views and opinions expressed in this volume are those of individual participants in the seminar and should in no way be attributed to FAO, UNESCO or the IIEP.

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List of abbreviations

A&E	Accreditation and Equivalency Programme
ADB	Asian Development Bank
APEAN	Asia Pacific Association of Educators in Agriculture and Environment
APEID	Asia-Pacific Programme of Educational Innovation for Development
APPEAL	Asia-Pacific Programme of Education for All
APRBE	Asia and Pacific Regional Bureau for Education (UNESCO, Bangkok)
BNFE	Bureau of Non-Formal Education
CDB	Career Development Bank
CenDHRRA	Centre for the Development of Human Resources in Rural Asia
CLCs	Community Learning Centres
CSB	Corn Soy Blend
DfID	Department for International Development, UK
DMCs	Developing Member Countries
ECD	Early Childhood Development
ECE	Early Childhood Education
EFA	Education For All
ERD	Education for Rural Development
ESCAP	Economic and Social Commission for Asia and the Pacific (UN)
ESDP	Education Sector Development Progamme
FELP	Functional Education and Literacy Program
EMIS	Educational Management Information System
FAO	Food and Agriculture Organization of the United Nations
EFA	Food for Education Activity
FFA	Food For All

FFE	Food For Education
FFT	Food For Training
FFW	Food For Work
FLS	Farmers Life School
GDP	Gross Domestic Product
HE	Higher Education
HIV/AIDS	Human Immuno-Deficiency Virus/Acquired Immunity Deficiency Syndrome
IADB	Inter-American Development Bank
ICRAF	Work Agroforestry Centre
ICT	Information and Communication Technology
ID	Identification Document
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IIEP	International Institute for Educational Planning (UNESCO)
IIRR	International Institute of Rural Construction
IREM	Innovating Rural Education in Mongolia
ILO	International Labour Organization
INRULED	International Research and Training Centre for Rural Education
IPGRI/APO	International Plant Genetic Resources Institute
IT	Information Technology
JICA	Japan International Co-operation Agency
JFICT	Japan Fund for ICT
JFPR	Japan Fund for Poverty Reduction
MDGs	Millennium Development Goals
MIS	Management Information Services
MOE	Ministry of Education
NFE	Non-Formal Education
NGOs	Non-Governmental Organizations
NVS	Natural Vegetative Strips
NWFP	North West Frontier Province
ONEC	Office of the National Education Commission

OSY	Out-Of-School Youth
PTAs	Parent/Teacher Associations
PADETC	Participatory Development Training Centre
PASSAGE	Philippine's Association of Agriculture Educators
PDR	People's Democratic Republic
PNEP	Non-Formal Education Project
PR	People's Republic
RMB	Renminbi
SDPs	Sector Development Programmes
SEAMEO	South-East Asian Ministers of Education Organization
SEARCA	SEAMEO Regional Centre for Graduate Study and Research in Agriculture
SEDP	Second Education Development Project
SME	Small and Medium Enterprises
SPs	Service providers
SWAP	Sector-Wide Approach
TA	Technical Assistance
TSER-RLI	Training Services Enhancement Project for Rural Life Improvement
TVET	Technical and Vocational Education and Training
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WTO	World Trade Organization
UPE	Universal Primary Education
USD	United States Dollars
VAM	Vulnerability Analysis and Mapping
VE	Vocational Education
WFP	World Food Programme
WHO	World Health Organization
WSSD	World Summit on Sustainable Development

Introduction

More than half of the world's population, and more than 70 per cent of the world's poor are to be found in rural areas where hunger, literacy and low school achievement are common. Education for a large number of people in rural areas is crucial for achieving sustainable development. Poverty education strategies are now placing emphasis on rural development that encompasses all those who live in rural areas. Such strategies need to address the provision of education for the many target groups: children, youth and adults, giving priority to gender imbalances. This complex and urgent challenge should be addressed systematically, through an intricate set of policy measures, at all levels of education systems.

Rapidly changing technologies and increasing globalization also suggest that better education and training have become essential for sustainable livelihoods and rural economy competitiveness.

For many years, the approach followed by policy-makers and education specialists has been to focus on practical and occupational agricultural skill training provided mainly at the secondary and tertiary levels. Yet, in an environment increasingly shaped by non-farming activities, and in a policy context dominated by the poverty reduction agenda, education for rural development requires a holistic approach going beyond the narrow boundaries of the traditional agricultural education and training concept.

Asia is home to the world's two largest populated countries as it is to many of the small island states. All countries in the region have rural populations, most have large numbers of rural communities and some are almost entirely rural. The observations and questions raised above apply to the Asian Region, in which the notion of education for rural development is only slowly making ground. At the same time, as will be observed from examples given in this Report, there have been a mounting number of on-going governmental and non-governmental policies and practices to alleviate poverty at large and poverty in rural areas, by way of both basic education and agriculture education. As with elsewhere, little of this poverty alleviation has been undertaken on an inter- or multisectoral basis. It was appropriate, therefore, for FAO and UNESCO to decide on Asia as the venue for this multisectoral Seminar on "*Education for rural development*".

This Report largely follows the programme for the Seminar. The Report places the Seminar in perspective, identifies its objectives and design, and provides an outline of the inauguration of the Seminar. Five thematic considerations are reviewed, comprising: (i) EFA: addressing the rural challenge; (ii) Enhancing food security through education and training; (iii) Targeting rural poverty; (iv) Responding to the transformation of rural labour markets; and a special session on (v) HIV/AIDS in rural areas. The presentations for each of these themes were interspersed with plenary discussions. Extended group discussion around three topics was another feature of the Seminar. The reports from the three groups were discussed in Plenary Session, as reported on below. After being introduced to the *FAO-UNESCO Flagship on Education for Rural People,* the final activity of the Seminar, in Plenary Session, was to discuss the lessons learned from, and the follow-up to, the Seminar.

The second part of the Report includes selected seminar papers dealing with education and rural poverty, rural labour markets, natural resources management and food security. The programme, list of participants and the complete list of the seminar papers are included as Appendices.

Seminar proceedings

1. The Seminar in perspective

Education and training need to be placed at the forefront of the rural development agenda in order to fight the evident extreme poverty and hunger in rural areas; to break the poverty-induced poverty-result cycle of rural life; to ensure sustainable agriculture, and to build the human capacity needed for development.

The *Food and Agriculture Organization* (FAO) *of the United Nations* and the *United Nations Educational, Scientific and Cultural Organization* (UNESCO), by way of the *International Institute for Educational Planning* (IIEP), undertook a comprehensive international study of education for rural development, including general and country studies. The findings of that study will be published, early in 2003, as a book entitled "*Education for rural development: towards new policy responses*". Seminar participants were introduced to the contents of this publication.

This publication will make a contribution to countering conventional wisdom and educational policies that have guided the provision of educational services in rural areas for several decades. It uses recent sources of information to *reformulate educational issues in the framework of the emerging rural development discourse.* Various contributions describe current trends and innovations in improving the provision and quality of basic education in rural areas. The book also discusses skill development challenges and analyses emerging strategies developed by innovative higher education institutions to cope with the new educational and rural environment. In so doing, it opens the door for *strengthening the links between education and rural development.* The publication also provides for public policy-makers to rethink the constraints inherited from the *sectoral division of labour* between ministries of education and agriculture.

The study itself is based on the first two goals of the *Millennium Development Goals* namely:

- The eradication of extreme poverty and hunger; and
- The achievement of *Universal Primary Education* (UPE).

The particular themes of the study addressed were:

- Constraints to achieving *Education for All* (EFA) in rural areas.
- Increasing access to education.
- Improving quality in education.
- Lessons and prospects for basic education in rural areas and rural development.

The FAO and UNESCO/IIEP decided to continue the discourse begun in this study, by holding this Seminar in Asia – the world's most populous region in both general population and rural population terms. Since rural populations include the world's poorest people, the Asian region is home to world poverty. It was appropriate, therefore, that nine countries, including the two most populated nations in the world, were invited to continue the discourse. It was requested that high-ranking, policy-level officials from education and agriculture ministries attend the Seminar. The end result was a discourse with some nine country representatives attending, along with a number of representatives of other organizations, and FAO and UNESCO/IIEP personnel. (The list of participants is outlined in *Appendix II*.)

Related particularly to this Seminar is Chapter II of a study to be published entitled *"Basic education in rural areas: status, issues and prospects"*. Part I of this chapter relates to the limitations in basic education for rural development – on which litanies have been published. Summarized here, they concern:

> *... rural children and adults – most of whom are poor – have very limited opportunities to obtain a basic viable education which would help them break out of the poverty cycle. Many rural children never enter a school; many of those who do enrol fail to complete the full primary cycle; and even among those who do complete it, many leave school barely literate. The curriculum and sometimes the language*

of instruction are not suited to local conditions. Rural schools are often in poor repair, poorly equipped, and staffed with poorly prepared and poorly paid teachers. Programmes targeting rural adolescents and adults often are not well organized, nor well adapted to local learning needs, and depend on untrained or poorly trained, low-paid personnel.

But there is progress in many countries as they continue their efforts to expand the coverage of basic education and to improve its quality. The second part of the said chapter elaborates on this, as did also participants in the Seminar on several occasions; these elaborations are reported on below.

In keeping with concerns across the region particularly from amongst donors, managing improvements in basic education in rural areas is the third main theme addressed in Chapter II. Emphasized is "*planning basic education for rural development*" which was also a recurrent theme in the Seminar, especially related to monitoring, evaluation and risk management.

The final theme of *Chapter II* of this publication – *co-operation and partnerships* – was a constant refrain of the Seminar, as the themes identified for the Seminar were addressed and the group discussions summarized below clearly demonstrate.

It can be claimed that the participants in this Seminar unwittingly (they were not aware of the contents of this study prior to the Seminar) provided observational, confirmatory evidence of the reported findings of the study. In Plenary Session, general questions were asked and answered with respect to:

- the validity of the study, which is a pertinent question of any study but particularly of a 'global' study;
- the role of boarding schools;
- the role of distance education;
- resource issues;
- the possibility to decentralize and differentiate urban and rural curriculum, and the need to keep a common core curriculum and national standards of learning;
- evaluation of poverty alleviation; and
- improving quality.

The final contextual aspect of the Seminar arising from the FAO-UNESCO/IIEP study focused on skills for rural development. The transformation of rural labour markets, governmental protectionism of agriculture, new modes of delivery, the funding of agricultural development and the role of higher education in rural development were among the issues raised. These were addressed in various respects during the deliberations of the Seminar.

2. The objectives and design of the Seminar

The Seminar had three objectives:

- present and discuss the main findings of the FAO-UNESCO/IIEP study on education for rural development;
- facilitate knowledge-sharing among high level officials from ministries of education and agriculture, based on their experience and on good practices to improve inter-sectoral co-operation, and to enhance the contribution of education to rural development;
- explore directions for follow-up activities, including possible FAO and UNESCO support.

These objectives were addressed in two ways.

Firstly there was a thematic approach in which panel presenters and plenary discussion focused on five themes, namely:

- Theme 1: EFA: addressing the rural challenge.
- Theme 2: Enhancing food security through education and training.
- Theme 3: Targeting rural poverty: the role of education.
- Theme 4: Responding to the transformation of rural labour markets: Implications for education and training.
- Theme 5: HIV/AIDS in rural areas: the impact on education and education responses.

Secondly, by way of group activities addressing the following three issues:

- Local development and community participation in rural areas: experiences in education;
- How can the education and agriculture sectors better work together? Experiences in multisectoral co-ordination and programmes;
- Re-engineering institutions of higher and vocational education; approaches to institutional change.

The group findings were reported to the Seminar for plenary discussion.

Thirdly, the Seminar's final programme activities involved a presentation on the *FAO-UNESCO Flagship on Education for Rural People*, and, finally, a plenary discussion on lessons and follow-up.(See Annex I for the final programme of the Seminar.)

3. Seminar inauguration

The Seminar was inaugurated by Khun Savitri Suwansathit, Secretary-General of the Thai National Commission for UNESCO, Mr Sheldon Shaeffer, Director, UNESCO, Bangkok, and Mr Changchui He, Regional Representative, FAO Regional Office, Bangkok in the presence of some 50 persons, representative of nine country educational and agricultural interests, donor and professional organizations, and observers. The persons responsible for the organization and facilitation of the Seminar were Ms Lavinia Gasperini, Senior Officer, FAO, Rome; Mr Malcolm Hazelman, Senior Extension and Communications Officer, FAO, Bangkok Regional Office for Asia and the Pacific; Mr David Atchoarena, Programme Specialist, IIEP, Paris; and Mr A.H.A. Hakeem, Co-ordinator APPEAL, UNESCO, Bangkok.

Khun Savitri Suwansathit welcomed participants to the Seminar, and to Thailand, emphasizing that *poverty was the root cause of the lack of rural development and that targeting poverty alleviation was essential to sustainable development.* Khun Savitri Suwansathit elaborated on the situation in Thailand and emphasized the ultimate importance of partnerships.

Mr Shaeffer identified the functions of the office for UNESCO in Bangkok and reiterated UNESCO's support for local development and *education for* *rural development.* He emphasized particularly the importance of addressing educationally preventive approaches to HIV/AIDS.

Mr Chanchui He welcomed the inter-agency partnership with UNESCO and went on to underline the *vital role of education for rural development,* the impediments to its progress and the goals which had been set for its advancement. He summarized and welcomed the Flagship proposal for *Education for Rural Development* (see *Section 6* below) and emphasized the importance of partnership in achieving the several goals of education for rural development.

4. Thematic considerations

The Seminar in Plenary Session addressed the five themes identified as *critical in education for rural development.* Perspectives on each theme were presented by panel presenters. Following each presentation, participants engaged in discussion of each theme. Theme 5 concerning HIV/AIDS comprised an extended session in similar format. The presentations and deliberations are summarized for each theme below.

4.1 Theme 1: EFA: Addressing the rural challenge

This theme was approached from three perspectives. The *first* provided the context for EFA planning and emphasized the need to focus more critically on education for rural development in the designing and execution of national EFA plans. The *second* perspective focused attention on the main issues in gender in rural education and the opportunities and challenges posed for EFA planning. The *third* approach was to put the theme in a country perspective, in this instance, Lao PDR.

4.1.1 The EFA context

The Seminar was reminded that the *Framework for Action,* adopted at the World Education Forum in Dakar, Senegal, in April 2000, called for new or revised national plans of action developed through wide consultation, and in the context of on-going sector reforms and poverty reduction strategies.

The *Framework for Action* followed from the assessment undertaken of the outcomes of almost a decade of activities since the World Conference on *Education for All* held in Jomtien, Thailand, in 1990.

Each of the Framework goals need to be related to education in rural areas, they include:

- To expand and improve comprehensive Early Childhood Education (ECE) especially for the most vulnerable and disadvantaged, requiring a special focus on expansion in under-served rural areas; to ensure that by 2015 all children, with a special emphasis on girls and children in difficult circumstances, have access to a complete free and compulsory primary education of good quality, compelling governments to educate all children, including those difficult to reach.
- To ensure that the learning needs of all young people and adults are met through equitable access to appropriate learning and life-skills' programmes, requiring that such programmes are appropriate also to the learning and working needs of youth and adults in rural areas.
- To achieve a 50 per cent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults, implying the need for special efforts in rural areas where most illiterates live.
- To eliminate gender disparities in primary and secondary education by 2005, and achieve gender equality in education by 2015, with a focus on ensuring girls' full and equal access to and achievement in basic education of good quality, requiring urgent attention on the special problems of achieving gender equality in rural areas.
- To improve all aspects of the quality of education, addressing the disparities in quality between rural and urban areas.

The Seminar then looked at several requirements for the development of quality education programmes including well-nourished students, quality teachers, adequate facilities, relevant curricula, a student-friendly environment, a focus on learning outcomes, the participatory management of education, and partnerships with local communities and cultures.

The strategies identified for *Education for Rural Development* (ERD) included the promotion of EFA linked to poverty reduction, the involvement of civil society, meeting the non-educational needs of education systems such as natural disasters, promoting gender equality, education to combat HIV/AIDS, better diagnoses of the educational needs of rural people and the use of *Information and Communication Technology* (ICT).

The Seminar noted that there was little direct mention of ERD in the Jomtien and Dakar documents, although there were implied references. In a recent meeting in UNESCO to review draft EFA national plans, little mention of ERD was found in these plans. It was *recommended that countries strengthen the focus of ERD in their plans.* This could involve establishing better data on rural populations, clarifying critical issues and components in EFA, documenting and exchanging best practices in ERD, and ministers of education and agriculture assisting each other in achieving EFA goals.

4.1.2 Gender issues in ERD

The Seminar was reminded that gender barriers, whether against women and girls or men and boys, are multiplied in rural contexts, although the former are the more likely to be discriminated against. Amongst the factors creating these barriers – using school attendance as an indicator of disparities – are the lack of infrastructure such as a safe means of getting to school, inappropriate school calendars which do not take note of local needs and conditions, irrelevant and/or biased curricula, the absence of female teachers who provide a safe school environment and appropriate role models, and the permeating influence of poverty, including monetary and food shortages.

Examples were provided to the Seminar of the situation in the Philippines where girls are favoured in terms of educational provision for a number of cultural and practical reasons. Another study, in China, had shown that the barriers facing girls in education in rural areas might be best breached by the generations working together – grandmother, mother and daughter, for example.

The Seminar was again reminded of the lack of reference to ERD in the Dakar Framework and national EFA workplans. Of even greater concern was the lack of commitment to gender equality in the EFA plans, with some noted exceptions, such as Indonesia, which has a chapter addressing gender disparity. It was suggested that, in revising EFA workplans, both should be given considerably more prominence, particularly noting the urgency in the Dakar Framework of *"eliminating gender disparities in primary and secondary education by 2005"* for which school enrolment will be the indicator of achievement. (It should be noted that a booklet entitled *"Guidelines for preparing gender responsive EFA plans"* is available from the Asia and Pacific Regional Bureau for Education (APRBE), UNESCO, Bangkok.)

4.1.3 A country study – Lao PDR

Lao PDR was described to the Seminar as a 'rural' country. The capital, Vientiane, has a population of 300,000 in a country of some 5 million people. So the meaning of 'rurality', which was raised several times during the Seminar, takes on a different perspective. Yet there is still an urban-rural divide and, within the rural population, there are degrees of poverty.

As with many countries represented at the Seminar, decentralization in Lao PDR has become a key government policy. The Government has developed a '*Focal Site*' policy to address rural poverty, to ensure the grassroots voice is heard and addressed. Three focal sites have been identified in the poorest of areas and these are being assisted in their development to become 'model' sites for rural development. With poverty alleviation as the goal, enhancement of food production and expansion into agricultural marketing are the prime strategies. In support of these developments access to education and health services is a government priority.

4.1.4 Plenary discussion of the theme

Of the general questions asked and comments made on this theme, most emphasis was on the meaning of 'rurality', the difficulty of changing National EFA Plans in the ways suggested and the difficulties faced in lowering barriers to equitable gender participation in schooling.

Participants were concerned that additions to the National EFA Plans to give more attention to ERD and gender-equity strategies were difficult, given the deadline for submission of same by the end of 2002. This time restraint was acknowledged and participants were reminded that the EFA Plans were intended to be 'rolling' plans, so that they should be reviewed and amended continuously. The focus on ERD and gender equity could be introduced in this context.

Examples were provided by participants of the difficulties in improving gender equity, particularly in accommodating girls from remote area in schools and having teachers go to, and remain in, remote locations. This is clearly an area of concern, which may be partly met, if the suggestion of networking on experiences were followed up.

4.2 Theme 2: Enhancing food security through education and training

The inextricable connection between food security and education was clear in the discussion on this theme, the second addressed in the Seminar. Food security is essential, if schooling is to have a chance; education is essential, if food security is to be realized.

Food security exists when all people at all times, have physical and economic access to sufficient, safe and nutritious food to meet their daily needs and food preferences for an active healthy life.

4.2.1 Food security for education

The Seminar was informed that the concept of food security involves four considerations, namely (i) availability, (ii) stability, (iii) accessibility and (iv) affordability. Regardless of whether food supplies are scarce or abundant, it is essential that people know how best to use available resources to acquire and consume a variety of safe and good quality foods.

The discussion focused on the fact that food, and secure food at that, was essential, if children and adults were to be 'ready' for education. Hunger bars children from attending school as all the family resources available are mobilized to try to meet the most pressing needs.

The Seminar heard that ***hunger also impedes learning***. The estimated 170 million chronically hungry people in the world attending school must learn while fighting hunger. Children in rural areas often walk long distances to school on empty stomachs. Many cannot afford to bring food from home to eat during the day. These children are easily distracted in the classroom and have problems staying alert and concentrating on the lessons. Teachers report that breakfast-deprived children fall asleep in class and are unable to benefit from the education provided. This syndrome generally referred to as '***short-term hunger***' has been shown to ***affect children's cognitive functions*** and, most likely, their ***learning achievements***. Several studies have demonstrated that the effects of short-term hunger are exacerbated in children who already have a history of under-nutrition and face nutritional deficiencies.

One answer given to providing food for education was to enhance the family's capacity to obtain food, nutritious food. A second option, which the participants heard, was to take nutritious food to the children at school and/or to provide families of children attending school with food. School feeding has been found to be extremely important in several ways. ***Firstly***, the feeding is a critical source of nutrition for children. ***Secondly***, the school provides a healthier emotional environment for children whose normal lives have been disrupted, and allows schooling to continue during a period when precious school time would otherwise have been lost, handicapping the child into the future.

Other benefits of the school-feeding programme include improvement of hygiene standards by promoting hand-washing and appropriate use of toilets, enhancement of health through deworming and other health treatments. Moreover, children are exposed to concepts of healthy food production and consumption – through participation in school gardens and education on nutrition.

4.2.2 Education for food security

The second main focus of this Seminar session was ***education for food security***. In general terms this was seen to underlie the whole thrust of ERD. If ERD were in any way successfully implemented, one of the outcomes would necessarily be its contribution to food security.

More particularly, the Seminar heard from the FAO of the particular need for nutrition education in the following terms.

> "*Having recognized that consuming a nutritionally adequate diet is vital for a healthy and active life, when searching for improved education strategies for rural development, nutrition education should become an integral part of this*".

The view was also expressed that education for food security had broader strategies, including the enhancement for training of whole households, courses for policy-makers, research grants to further the efforts in education for food security, awareness-creating modules, the training of women and the development of multimedia manuals.

> Emphasis was also placed on a holistic approach to education for food. "*If education and training are the suggested strategies for rural development and enhancing food security*", said one speaker, "*then the relationship between the two, education and nutrition, should be explicitly considered.*"

4.2.3 A case study

Participants heard of several projects in the course of this session. The observation in *4.2.1* above, namely "*Moreover, children are exposed to concepts of healthy food production and consumption – through participation in school gardens and education on nutrition*" and the last point made on a holistic approach, were central to the *Agricultural Education for Thai Schoolchildren Project* in Thailand, an Initiative of Her Royal Highness, Princess Maha Chakri Sirindhorn. In this project, children are provided with agricultural knowledge and, at the same time, produce food used to prepare their school lunches to help reduce malnutrition and, indirectly, reduce the burden on the family. The goal is to raise awareness first and let productivity follow. A number of benefits were seen in starting agricultural education with young children ranging from personal advantage for the children, benefits to the family in terms of the agricultural awareness the child can take home, including new technologies, and benefits to the school and community in developing team building and environmental awareness.

4.2.4 Plenary discussion of the theme

The overall emphasis on nutritious food for education and food security, in particular, was not lost on the participants and several questions were asked and discussion ensued on food security. The second main concern, from the case studies cited in particular, was the issue of sustainability of food for education projects, particularly those which depended almost wholly on donors. This was seen to be an on-going issue, not easily resolved. Questions mainly for information were also asked of some of the projects identified in the course of the Panel Session.

4.3 Theme 3: Targeting rural poverty: the role of education

This session in the Seminar brought the participants to the very purpose of the Seminar. As the presenters at this session came from such different perspectives – a major donor, the country with the world's largest population, a UN agency and a *Community Learning Centre* (CLC) in Thailand, it is proposed to report in a summary way the contribution from each, concluding with reference to the plenary discussions.

4.3.1 A perspective from the Asian Development Bank (ADB)

Education has been shown to have an impact on individual workforce outcomes such as a higher income, but the impact is greater than that. Literacy and formal schooling are linked with reduced fertility rates, improved health and sanitation practices and an increased ability to access information and participate in various social and economic processes. Educated parents also tend to invest more in children's schooling, health/nutrition, and human capital measures important for future well-being. *Ensuring women's access to education plays a key role in the transition from an investment in child quantity to an investment in child quality.*

If investment in education in general is so justified, *investment in rural education is even more so.* This is accentuated by the fact that countries have largely continued with the urban bias in the allocation of resources.

Participants in the Seminar were informed of the Asian Development Bank's (ADB) new education policy approved in August 2002. It declares that *"All children and adults will have equitable access to and complete education of sufficient quality to empower them to break the poverty cycle, to improve their quality of life and to participate effectively in national development"*. The three priority areas for the Bank are (i) reducing poverty, (ii) enhancing the status of women, and (iii) facilitating economic growth. These major areas have six cognate priorities. Although, as with UN statements, the policy does not explicitly identify rural areas and ERD, it does so implicitly.

In targeting rural areas, ADB projects have had to face a number of difficulties including:

- access, quality and efficiency;
- providing basic education outside the formal system; and
- reaching rural educators.

Donors have also had to take note of education reform in Member States including decentralization, funding and sustainability, and curriculum and broader innovation.

Participants were finally reminded of the opportunities and pitfalls associated with *Information and Communication Technology* (ICT) in education.

4.3.2 A perspective from PR China

Macro-economic trends have played a large role in the reduction of poverty in PR China. The growth in agriculture, the growth in township enterprises, the increase in migration of the rural workforce into the cities, and the increase in the funds for poverty reduction made available by the Government have all made essential contributions to poverty reduction in the rural areas of China.

These contributions were elaborated on to the participants. One of considerable interest was the growth in township enterprises. Township enterprises are industrial, or service enterprises, located in rural areas, and run by farmers. In the year 2000, there were over 20 million township enterprises employing some 128 million people, mostly former farmers, and which accounted for 31 per cent of the *Gross Domestic Product* (GDP). The townships are seen to have contributed significantly to the rural economy in taking some strain off that economy.

Participants were advised of and provided with statistics for the contribution of basic education in the development of the township enterprises, as well as in the growth in agriculture and the migration of the rural labour force to the cities.

4.3.3 A perspective from the Economic and Social Commission for Asia and the Pacific (ESCAP)

Targeting rural poverty was a major ESCAP concern. Evidence from the past had indicated links between increased literacy and national development, although not in all cases. Sri Lanka and the Philippines were given as examples where increases in literacy had not seen corresponding increases in development. However, these were the exceptions rather than the rule.

Decisions on how to target rural poverty were the required next step. Three principal ways identified were (i) capital investment; (ii) agrarian reform and (iii) education for rural development. The first two had been tried in the region with modest success in some instances. However, it was suggested that the emphasis now needed to be placed on education for rural development, albeit not to the exclusion of capital investment and agrarian reform.

The principle reasons for stressing education for rural development were the broad approach to the problem which education offered, not just agriculture education, and the greater likelihood of sustainability, if a multisectoral approach were adopted. The gains believed to result from a focus on education were addressed in economic, political and cultural terms.

4.3.4 A perspective from a Community Learning Centre *(CLC) in Thailand*

Community Learning Centres (CLCs) provide skills training of different varieties according to local needs. This CLC is in Numyuen District in Ubon Rachathani some 600 km east of Bangkok. It has focused its skills on programmes, using ITC where possible, on the poverty reduction strategies of the Government. Three such strategies were introduced in Thailand in 2001-2002, namely:

- the *One Tambon One Product* strategy (the Tambon is the unit of local government above the village – on average across Thailand, there are ten villages to one Tambon);
- loans of one million Thai Baht to each village in support of the first strategy (approximately US$23,200 at November 2002, exchange rates);
- the postponement of farmers' repayments of debt.

The *One Tambon One Product* has provided the opportunity in many instances for rural poor to develop small industries ranging from Thai paintings to foodstuffs of various kinds, to silk products, to making coconut dolls and even to producing Thai fermented liquor.

4.3.5 Plenary discussion on education and rural poverty

Most of the plenary session was spent on questions for information particularly concerning the township enterprises and the One Tambon One Product strategies.

4.4 Theme 4: Responding to the transformation of rural labour markets: implications for education and training

There was a considerable amount of uniformity on this topic in the approaches presented to the participants with respect both to the *transformation of labour markets* and the *implications for education and training*.

4.4.1 Transformation of labour markets

As the rural labour force increases in size, opportunities must be made available to those seeking employment not only in the rural sector but in the urban sector as well. This will require not only the improvement of human resources but also the mobilization of savings, from income generated by the rural sector, and investment in rural development projects.

In many cases for the young, agricultural employment and the rural life style were no longer perceived as economically tenable or attractive. Population growth and pressure on the land pose added challenges to rural labour markets.

Several sources of non-farm rural employment were discussed, including:

- green industries;
- eco-tourism;
- expansion of cottage industries and handicrafts; and
- rural enterprise at large such as electrification and communications.

It was felt that development of rural enterprises could ensure greater economic sustainability, and political and social stability.

One project described to Seminar participants was *Landcare* which is a movement of autonomous, farmer-led organizations supported by local government which has as its premise *natural resource management promotes rural advantages*. It also promotes labour-saving technologies, which then provide farmers with time to take on non-farm work, which increases their income without loss of their basic livelihood. It was not surprising that evaluations in the Philippines showed that farmers preferred 'labour-saving approaches' to farming over 'non-labour-saving approaches'.

Thus, within the agricultural community, a range of labour market prospects is emerging, which may assist in alleviating poverty in the rural sector.

4.4.2 Implications for education and training

All panellists advocated reform in curriculum to meet the demands of transformed labour markets. However, their approaches differed from high-cost variations to existing programmes to particular project-target requirements. The selection, which follows generally, encompasses the suggestions made:

- improve agricultural and natural resource management knowledge, skills and attitudes;
- enhance the effectiveness of formal and non-formal education through active, experiential and contextualized learning;
- link with and make good use of existing national and global policy frameworks such as *Education for All* (EFA) and *Food for All* (FFA);
- strengthen linkages between communities, schools and homes;
- encourage local and regional collaboration and networking through flexible and participatory stakeholder approaches to which might be added approaches required by new agricultural marketing.

4.4.3 Plenary discussion of this theme

The plenary discussion, which followed this set of presentations, was confronted with issues such as the poverty alleviation, competitive productivity nexus; self-employment and ownership in labour market interventions, and linkages between educational reform and new labour markets. *The outcome was one of questions rather than solutions.*

4.5 Theme 5: HIV/AIDS in rural areas: the impact on education and education responses

In his opening remarks, the Chairperson emphasized the interrelatedness of risk and vulnerability in addressing HIV/AIDS, noting that most HIV/AIDS programmes were about risk intervention which involved the identification of risk areas, locations of known high transmission and situations in which risk behaviours are acted out. These mark the most strategic and targeted HIV/AIDS prevention activities. He went on to stress vulnerability and its reduction. *"Education, food security, agricultural policy, minorities policies are hopefully thought out with improvement of people's lives and the increase* *in economic opportunities as the guiding principles ... Vulnerability reduction is not about programmes to teach them [the vulnerable] about the risks they might face, but empowerment to improve their life situation, socially and economically, so that other opportunities can be available."*

Amongst the presentations was a report on the findings of a 'study-in-progress' commissioned by IIEP entitled *"Improving education practices and strengthening multisectoral efforts to enhance the response to HIV/AIDS"*, which will be published in 2003. The main purpose of this study is *"to analyze how education can reduce the spread in rural areas and mitigate its impact on rural development and food security of HIV/AIDS, in northern Thailand"*.

Citizenship was the focus of a film on HIV/AIDS. Many hill-tribe residents in Thailand are not recognized as citizens of that country. They are not entitled, therefore, to health care, school completion certification and freedom to travel (amongst other things) – which are basic rights in the minds of most. These people are very vulnerable to discrimination and harassment by law enforcement and administrative personnel. Being at the end of the line as non-persons, they are very vulnerable to, and at considerable risk from, HIV/AIDS.

Several partners have joined in a process of empowerment of hill-tribe people, by embarking on an enfranchising programme. With citizenship and an Identity Document (ID), opportunities are provided to the new citizens, of which they were previously deprived, and which are believed to reduce their vulnerability to HIV/AIDS, and make them better able to cope with its risks. These groups have also begun carrying the fight against HIV/AIDS to others in a novel way by means of 'soap operas', a genre which is well known to Thai TV audiences.

A case study of the *Farmer's Life School* (FLS) in Cambodia was presented, which demonstrated how such a school could be an empowerment tool for building HIV/AIDS resistance amongst farmers.

HIV/AIDS as a cause of food security and food insecurity leading to HIV/AIDS was the theme of another presentation. Examples were given from Myanmar and PR China. In the latter case, poverty had led to people selling blood, which was collected in an unsanitary way leading to HIV/AIDS infection.

The final presentation was made by a demographer who provided information on HIV/AIDS in Thailand.

In plenary discussion, questions were asked and answered concerning the effects of migration on the transmission of HIV/AIDS, education's influence in reducing risk and vulnerability to HIV/AIDS, the need to emphasize male responsibilities and not only female in the transmission of HIV/AIDS, and the role of farm management in reducing the transmission of HIV/AIDS.

5. Group findings

The Seminar broke into three groups on a self-select basis to discuss topics related to the theme of the Seminar. The Reports of these groups are summarized below.

5.1 Group 1: Local development and community participation in rural areas: experiences in education

5.1.1 Issue 1: The importance of community participation

Group 1 decided first to address the question as to why *community participation* was important. It was agreed that the success or failure of any project hangs on the participation of the community and the degree of its participation. 'From donorship to ownership' is the necessary approach, if project implementation is to be successful and, very importantly, if it is to be sustainable. Furthermore, as communities begin to own projects, commitment by them to a project grows.

Community participation is also functionally important. It provides better sources for needs identification, data and access. Further, such participation, enables 'outsiders' better and more quickly to understand the culture, the politics and the social fabric of the community. The end result is empowerment of both the community/client owner and the project/programme donor/facilitator.

(a) Major issues

The first issue addressed by *Group 1* was: *What mechanisms are required to promote community participation in education in rural areas? Interaction and confidence building* were seen to be the first of several salient points in the promotion of participation. The means for achieving these varies according to circumstances. In one instance in Viet Nam many years ago, a young teacher, who later became a "Hero of Viet Nam in education" was sent to a remote village to set up a school. He decided he had so much to learn about the local situation that he worked for the Headman for two years, before starting his school.

'Participation' cannot be taken for granted. Cases were cited in PR China and Cambodia, where people have *no understanding* of participation. They have learned to do as they are told. In such cases the group recognized the need for *training for participation* in some instances at least. In the plenary discussion of the Group Reports, it was suggested that the 'outsider', too, might well be in need of such training. So *training in participation* was seen to be a salient point in promoting community participation.

A third salient point was the need to *use existing community structures* as far as possible in promoting community participation. Enhancement of such structures was seen to be preferable to imposing new ones. This is a trend in county approaches to external loans and grants. Empowering what exists is regarded as being more likely to ensure sustainability than creating *ad hoc* structures. As was observed at the plenary session, it is important to ensure that what exists assists the cause and that what exists represents equitably community interests.

The use of what exists also led the group to see *networking* as a salient issue. Networking with other educational institutions, including higher education institutions is one example of this. Such institutions can provide useful resource support, as in Thailand where university students assist in organizing rural youth clubs. As was mentioned several times during the Seminar, one critical contribution of networking can be the spread of information about "what works", to assist communities and programmes.

The final salient point advanced was the need for *multidisciplinary and multisectoral approaches.* This was yet another oft-repeated theme of the Seminar and *Group 1* saw a very relevant application of it in respect of community participation in education.

(b) Constraints to successful community involvement

Group 1 also identified a number of constraints to successful community involvement in education in rural areas. The *readiness* of the community to participate has already been mentioned. This may be related to a hesitancy of villagers to express themselves.

Social issues, such as approaches to *gender equity* may impede community participation. This may not only be a factor of social exclusion but also simply be one in which women's responsibilities make participation minimal, if not impossible. This leads to the constraint of time as an inhibiting factor.

The *lack of infrastructure* such as transportation and communication can inhibit community development proposals. Resources generally are needed in support of rural programmes, especially, but not only, financial resources.

(c) Concrete results

Throughout the Seminar, case studies were provided of projects involving community participation. *Group 1* emphasized the examples of the *Farmers Field School* (FFS), *Community Learning Centres* (CLCs), and the *Training Services Enhancement Project for Rural Life Improvement* (TSEPRL) in Malaysia.

(d) Lessons learned and recommendations

Group 1 proceeded to look at lessons learned and suggested recommendations for consideration. The first of these is the need to carefully *analyze success projects* in the context of a given community, before suggesting replication in that community. While it is important not to reinvent the wheel, it has to be the right wheel. Associated with this point, it is recommended that a *choice of mechanisms* should be on offer so that client-owners have a real choice in determining the future directions for their community. In order to minimize risk in the choice, it is also suggested that *projects and programmes be launched on a small scale* to provide the necessary experience, to instil confidence and to ensure viability.

Capacity building, in terms of education and training, is an essential recommendation for community participation in education. Mention has already been made of this need with respect to participation. It is also needed to ensure a clear understanding and delineation of functions in the community. Gender, social and cultural issues also need to be part of the capacity building process.

Mobilization of local resources is another recommendation for participatory development and local projects and programmes. Many projects identified during the Seminar focused on this recommendation, having mobilized and utilized local resources to advantage. Such resources are the people themselves and what they bring to participation, including their indigenous knowledge. The benefit in the long-term is sustainability.

Several other recommendations suggested by *Group 1* included *information dissemination through networking* and the *provision of adequate infrastructure*, which have already been mentioned. An additional recommendation is the *minimization of political intervention*. While it was acknowledged that political intervention was inevitable, examples were given of programmes and projects determined on the basis of political advantage, not community interest.

5.1.2 Issue 2: Key stakeholders for engaging educational institutions/programmes in local development initiatives

Group 1 proceeded *to identify stakeholders* and their roles to establish the best possible partnerships for assisting local development.

(a) Stakeholders and roles

Parents are obvious stakeholders and, not surprisingly, were the first identified. They are the first educators of their children, they motivate them, provide care for them, sustain them and guide them. Moreover, parents are key stakeholders. Without them no partnership for local development initiatives will work.

Community and religious leaders form a second grouping of stakeholders. Their roles are critical to community life and development. They are sources of information for the people; they provide community leadership; they are there to develop community consensus, commitment and growth, they have a role in conflict resolution and, in their own ways, provide the ethical leadership and underpinning required for stable communities. They also provide financial support as with the temples supporting local communities in Thailand.

School principals and teachers, and other educators are also a focal point for engaging in local development initiatives. Their educative roles are obvious. More than that they are often among the more educated and are able to provide broader perspectives in developing initiatives.

Extension workers and multi-government agencies contribute by way of motivating and facilitating change. They can provide the technical backstopping essential for successful development initiatives and can provide external linkages for assistance to local people.

NGOs, voluntary groups and private sector organizations and industry are also key stakeholders. In their different roles they can provide technical and financial support; industry and the private sector are sources of employment and all the stakeholders mentioned can engage in curriculum and training, as with *Small and Medium Enterprises* (SME) in various countries.

Community members are yet another group of stakeholders. They have a role in the mobilization of local resources and can take part as planners, researchers, implementers, monitors and evaluators.

Institutions of higher learning are stakeholders with a role to play as educators, researchers and information disseminators.

Local and foreign financial institutions are necessary stakeholders. They are primarily thought of for their financial support. But local and international banks, including donor banks, can also provide inputs by way of research, project experience and management, networking and dissemination.

(b) Partnerships between stakeholders

Group 1 identified several different combinations of stakeholders from the experience of its members. These included:

- parent/teacher partnerships in a range of projects, one involving a school feeding programme, for example;
- higher education-community partnerships in an "Adopt a Community Project";
- community-school partnerships in non-formal education;
- community-higher education in a project where the community assisted in data collection for a research project;
- university/government/local community in a land care initiative.

(c) Constraints to success in partnerships amongst stakeholders

Several constraints from *Issue 1* apply in this instance as well. In addition, private sector involvement may be a constraint depending on the motivation for the partnership. Profit making may be one, which could be a restraint as conflicts of interest may arise. Organizations with political, religious or other affiliations may have agendas not in keeping with those of the initiative being put in place. Donors and financiers, too, may also want to impose conditions not in keeping with the purpose of the development initiative.

(d) Recommendations

The first recommendation with respect to stakeholders and partnerships is that the roles of each partner *be clearly delineated.* This will ensure neither overlap nor gap in the resources required to achieve the development initiative.

Systematic planning is essential for the success of an initiative. Such plans need to be detailed, feasible, viable and sustainable. In addition, plans should include a matrix of risk and risk amelioration to minimize failure.

Clarity and transparency are essential for successful partnerships. Honest and trust cannot be put in question. No hidden agendas should be allowed. Openness and frankness should be evident throughout the progress of implementing the initiative and reporting should be accurate.

Partnerships need supporting whether in terms of capacity building or the supply of adequate infrastructure. Requirements should be determined in advance of the implementation of a development project.

5.1.3 Issue 3: What instruments can facilitate the emergence of local development initiatives?

Group 1 gave concrete outcomes from other projects as a first suggested instrument. Whilst the danger of replication has been mentioned above, what has happened elsewhere, particularly if successful, can be a highly motivating factor.

As already indicated, systematic planning and guaranteed funding can facilitate development initiatives. The latter may come from government, corporate and other private sector support.

(a) What support is required?

Education and training of both benefactors and beneficiaries are required, in the first instance. Technical support and capacity building will then be required for all stakeholders involved. This support and capacity building will need to be based on a needs assessment and continue throughout project implementation, until sustainability is guaranteed.

Political will is essential whether it be in central government or the local community. Without it, interventions may occur which pose obstacles to the achievement of the project. At the same time, political will does not mean constant political intervention. But sustained advocacy on the part of those in power would provide welcome support.

Constant monitoring and evaluation support is essential to an initiative staying on track and being completed on time.

Without funding, few developmental projects can be implemented. It goes without saying that resource assistance of all kinds is the essential and necessary support required for developmental projects in rural areas.

5.2 Group 2: How can the education and agriculture sectors better work together? Experiences in multisectoral co-ordination and programmes

5.2.1 The nature of the issue

Group 2 saw the nature of the issue concerning its topic area from four perspectives.

First, *education and the agriculture sector should work together* for rural development and poverty alleviation. This reflects this Seminar and the FAO-UNESCO Flagship for Rural People programme. The achievement at the international level needs now to be replicated at both national and local government levels, for the benefit of rural people.

Second, *education should be holistic*. In this instance 'holistic' is being used in the sense of being omnipresent, as it actually is in agriculture, administration, health, justice and all such government and private sector enterprises and more actively so.

Third, *multisectoral participation* not only makes good sense and good government, it has very functional benefits. Included among these are the avoidance of duplication of work and possible budgetary savings in the sharing of resources. Complementary rather than competitive government and administration is preferred.

Fourth, *the need for mechanisms to prevent the recurrence of the same problem*. More analysis needs to be done on what creates poverty and how causes can be alleviated.

5.2.2 Constraints on Education and Agriculture working together

In terms of *overall structure*, the fact is that education and the agri-sector largely work separately. Participants experience that there is little collaboration between ministries of education and agriculture at central or local levels. Each has its own mandate and bureaucracy which each is keen to protect. Likewise vested interests may see more advantage in keeping the ministries apart.

In considering *content and curriculum development*, a number of constraints became evident to *Group 2*. In the first place, there is a mismatch in the learning of students and their experiences, and the competencies required in the agriculture sector. Curriculum reform to alleviate this constraint is clearly needed. But a new curriculum will require capacity and capability to implement it. There was seen to be a lack of person power to do this.

In terms of the delivery of educational service, two main constraints were noted. First, neither *the lack of national or local guidelines* on the preparation of an integrated curriculum nor on the delivery mechanisms to be used. Second, the present delivery methods comprise teachers teaching and students listening – a sort of blotting paper approach. Therefore in *Group 2*, the need was recognized for teachers to be trained as facilitators of learning and *to see that* as their principle role.

A further restraint is the destination of teachers on the completion of their studies. Graduates prefer areas of employment which are much more attractive than agriculture. Also, they have no commitment to go back to rural communities to assist in rural development and transformation. In the plenary review of the group work, it was mentioned that there was a need for government direction in this matter. In Malaysia, a project was in place to encourage a 'return to the land' – with considerable success. The project involved a package programme, which included incentives to graduates, in terms of land and training.

5.2.3 Concrete results

The concrete results, of *Group* 2, in terms of education and agriculture joining forces were reported on for Viet Nam where there were combined efforts in a social movement encouraging children to go to school; for Thailand, where decentralization of the curriculum included allowing 40 per cent of curriculum content to be based on community and local needs; in China, where there is a central government integrated mechanism for agriculture education, and science and technology for tertiary and upper secondary level curriculum development; and for CLC. It was reported from Thailand that, despite the flexibility allowed in the curriculum, fewer schools are offering agriculture subjects.

Despite the successes, *Group 2* felt that, while some integration was taking place at the central or national levels of government, and sometimes for vocational and higher education, it *was not seeping down to the grassroots levels and basic education*, which addresses the needs of the vast majority of the population.

5.2.4 Lessons/suggestions

The main policy recommendation from *Group 2* was that *guidelines should be formulated in collaboration between the ministries of education and agriculture, and the community.* (Many countries have a ministry for local government such as a Minister for the Interior or a Minister for Local Government, which might be included in this grouping.)

A second policy suggestion was that institutional and legal frameworks on ERD should be formulated.

Several suggestions from G*roup 2* related to tapping resources for teaching. Among the suggestions made were that farmers could be used as teaching/resource persons; that extension workers could develop the competencies to handle agricultural subjects such as animal and crop production; and that government employees could also be tapped as resource persons. The suggestions for payment of the latter, which had come from the group, namely no pay if in working hours but paid for weekend work, was questioned in the plenary session. The main suggestion was that incentives should be offered, as per the HABITAT Project in the Philippines.

The remaining suggestions from this group were that private experts tapped as resource persons should be paid; for Vietnam more extension workers should be hired and paid by the Government to work in district extension centres and communes; and that the agriculture industry should be developed to attract graduates back to farming.

5.2.5 Institutional legal frameworks and facilitating mechanisms

The group undertook this task on a country-by-country basis, as reported below.

Thailand:	The new Education Act to implement reform in education will decentralize education in having 175 education area offices in 2003, with 100 per cent flexibility in the curriculum, providing incentive for agricultural interests' inputs.
PR China:	A central-government integrated mechanism has been established for agriculture education, and science and technology for tertiary and upper secondary level curriculum development. The training of farmers is handled by the Ministry of Agriculture.
Vietnam:	The Government has established an *Education Encouragement Fund.*
Philippines:	There is a new *Basic Education Curriculum* which offers only five subjects namely English, Filipino, Mathematics, Science and Makabayan (values, social studies, physical education, music, agriculture, home economics and arts). The training of farmers is handled by the Department of Agriculture, the Agriculture Training Institute and Agricultural State Colleges.

The over-arching facilitating mechanism suggested by *Group 2* was the documentation, writing-up and circulation of success stories on multi-sectoral initiatives for rural development.

5.2.6 How to initiate and sustain multisectoral work at the local level

Three suggestions were made in this regard, namely:

- *Formulate* a national framework on multisectoral collaboration at the national level, to be approved by the Ministry of Finance and allow local partners to choose and implement activities responsive to local needs.
- *Allocate* a budget for multisectoral activities for education in rural areas.
- *Identify* district/provincial activities that multisectoral groups can participate in.

5.2.7 Extent of poverty reduction initiatives provided

Group 2 identified two such initiatives, one in Thailand and one in Viet Nam. In the former, a grouping of UNESCO/UNDP/Thai Government support CLC, which are involved in training for income-generating skills, savings and loan, and marketing through ITC. In the latter, there is a *Country Comprehensive Poverty Reduction and Growth Strategy*, which is a ten-year programme with a budget of US$1 billion. Target programmes for the strategy are education and training, including curriculum and facilities improvement, teacher training, and IT development, amongst others.

5.2.8 Requirements to ensure that donor interventions facilitate multisectoral work

The group placed the onus on governments to:

- *sensitize* donors to the importance of supporting inter- and multisectoral work to overcome their own sectoral agenda;
- *request* donors to earmark some funds for multisectoral educational activities in rural development;

- *match* the interests of donors and government through multisectoral activities;
- *demonstrate* to donors successful multisectoral initiated projects, for example the CLC.

5.3 Group 3: Re-engineering institutions of Higher Education (HE) and Vocational Education (VE); approaches to institutional change

5.3.1 Nature of the issues

Group 3 identified four issues.

The first issue was the question *whether institutions had fulfilled their original mandates and whether those mandates were still relevant.*

Discussion on that issue moved the group to the second issue which was *the need for reform of the institutions*, as the mismatch between education and the market place had been accentuated. One example of this was the irrelevance of existing practices in meeting the requirements of industry and other stakeholders.

The third issue was that of *accessibility for all* (including rural, disenfranchised groups, non-traditional etc.) for vocational and technical education and the group suggested an 'open entry' 'open exit' approach. (*The group did not recommend this for higher education.)* Whilst not able to be discussed at length in the plenary session, it was clear that this proposal would create some debate. Along with this suggestion went the fourth issue related to the *need for interdisciplinary, interdepartmental and intersectoral approaches to HE and VE.*

5.3.2 Constraints to re-engineering institutions

Dozens of constraints were identified by *Group 3*. Three of the most important constraints were selected by the group for further elaboration.

First, the *allocation of funding to institutions and its distribution*, were both found to be inadequate. Second, the *rules and regulations* of institutions are not conducive to innovation in, and the expansion of, programmes. (This constraint is under scrutiny in Sri Lanka in a World Bank study.) The third and final constraint related to the *inability of schools and students to stay abreast of the rapid changes in technology.*

5.3.3 Strategies to address funding constraints

Determining strategies for addressing each of these constraints was the next task of the group. With respect to funding, countries provided a number of suggestions from their own experiences. In the case of the Philippines, several strategies had been tried ranging from having programmes and schools adopted by non-governmental and community-based organizations; subsidizing students to attend private schools with extra capacity, when public schools are overcrowded; a *Study-Now-Pay-Later* Student Loan Programme; and the use of endowment funds. India had adopted two approaches: one to encourage academics to compete for external research grants; the other to charge differential fees for foreigners and for local people who did not meet normal admission requirements. Lao PDR had followed the self-sufficiency path with production-based vocational schools with a learning/earning/doing approach, whilst PR China had pursued funding for university-based extension services by the provincial government.

5.3.4 Strategies to address constraints from rules and regulations

These continued in a similar vein to the strategies mentioned above. Focusing funding on a limited number of accredited institutions was a strategy supported in the Philippines and Indonesia. In a move to dramatically reduce transaction costs, Indonesia replaced a cumbersome tendering process with a block grant scheme directly to students, schools and school communities, usually in poorer areas, and requiring some counterpart funding. In answer to a question in the Plenary Session, there had been few defaulters in the life of this scheme.

Revolving fund schemes had been tried in the Philippines, and India, and the latter had also adopted a career advancement path scheme for staff. The

Philippines, along with Indonesia had also introduced tax exemption schemes for educational books and equipment. In Lao PDR, profit sharing of school-based income generating activities provide incentives for teachers, students and school administrations. A profit sharing formula was adopted so that 60 per cent went to the producers, 20 per cent was used for school care and 20 per cent went to operational and maintenance costs.

5.3.5 Strategies to address constraints from technological changes

Indonesia has developed a number of strategies for coping with constraints related to the advancement of technology. These include partnerships with advanced, developed countries and developing local school network areas, using low cost radio network Internet access. Amongst other strategies Indonesia has developed along with other countries are a dual system of TVET, in which industry maintains the momentum and bears the cost of IT (the Philippines and Lao PDR also adopt this strategy); rural awareness work experience; and teacher awards for innovation. India also has similar programmes.

The Philippines has introduced tax incentives to import high tech hardware. They also introduced a scheme to encourage Filipino scientists to return home. A final strategy comes from India, which offers one-time grants for institutions to catch up and keep pace with IT developments.

5.3.6 Suggestions

Group 3 made a number of suggestions for future activities related to their discussion topics. They were:

- *FAO and/or UNESCO* providing more workshops on curriculum development for rural development; and for restructuring the basic education curriculum and delivery system.
- *In-service* teacher training.
- *Identifying* the key competencies required for rural development.
- *Creating* enabling environments.
- *Facilitating* research on vocational and technical education.

6. The FAO-UNESCO Flagship on Education for Rural People

FAO introduced the Flagship to the participants, explaining why there should be such a flagship, its origins in terms of previous world conferences on education and food, and the target-based *Millennium Goals*, and the reasons for FAO involvement in the Flagship. The Seminar was informed of the activities of the Flagship and its present membership. Participants were then invited to publicize the Flagship and encourage membership of it, including in their respective institutions or organizations.

FAO-UNESCO Flagship on Education for Rural People

FAO and UNESCO are inviting Member States, UN entities and civil society to join in the establishment of a new partnership on *Education for Rural People.*

This initiative seeks to address rural-urban disparities, which are a serious concern to governments, and the international community as a whole. About 70 per cent of the world's poor live in rural areas. Despite the fact that education is a basic right in itself and an essential pre-requisite for reducing poverty, improving the living conditions of rural people and building a food-secure world, children's access to education in rural areas is still much lower than in urban areas, adult illiteracy is much higher and the quality of education is poorer.

In this regard FAO and UNESCO have joined efforts in the establishment of a new flagship within the *Education for All* (EDF) initiative with a focus on *Education for Rural People.* The partnership will be open to members committed to working separately, and together, to promote and facilitate quality basic education for rural people.

Activities of the Flagship

1. At the national level:
    - Provide technical support to countries willing to address the basic educational needs of rural people by formulating specific plans of action as part of the national plans for EFA.
2. At the international level:
    - Advocacy and mobilization of partnerships for the education of rural people concentrating on strategic global, regional and international events, and encouraging the same within countries.
    - Identify capacity for different substantive components on education for rural people within partners' institutions.
    - Support the exchange of good practices and knowledge on education for rural people.

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7. Plenary discussion on lessons and follow-up

7.1 Major Issues

The Seminar was a learning experience in many respects. Lessons learned are discussed under several headings as outlined below:

Issues such as *poverty, gender and other inequities, access,* and *empowerment,* to name a few, are legion in rural areas and amongst rural populations. Neglect of them inevitably leads to their reproduction.

7.1.1. *Education for All* (EFA) Action Plans need to progressively address these issues, if *Education for Rural Development* (ERD) is to have a base from which to work.

7.1.2 The lessons learned for *policy formulation* are, amongst others, that policy needs to be based on dialogue and partnership, participation in same by rural communities is critical and that participatory processes need to be at the heart of policy formulation, implementation and evaluation.

7.1.3 Regarding *ERD planning*, rural-sensitive approaches which are context specific are required. The decentralization motif, common in many countries, needs to be encouraged. Yet its effects on relevance and equity for rural populations (including their embedded minority groups, supposedly empowered by decentralization), should be assessed. In addition, donors should consider earmarking funds for ERD.

7.1.4 *Educational management* for ERD requires a rethinking by educational institutions of their role in, and responsibility to, ERD; the urgent development of school mapping and *Educational Management Information Systems* (EMIS) to provide much needed reliable data; competent institutional management; and monitoring indicators to define rurality, to give substance to the urban-rural divide and to evaluate the impact of ERD-specific projects and programmes.

7.1.5 Education needs to pay more attention to *its role* in mounting preventive measures to help combat the *HIV/AIDS pandemic*, and *its role* in inclusive measures to support those with HIV/AIDS, especially in rural populations.

Flowing from the above, a number of capacity building challenges can be identified with respect to:

- decentralization;
- school mapping;
- information systems;
- institutional management for HE and VE;
- curriculum development in terms of flexibility and relevance; and
- ERD at large.

7.2 Plenary Session follow-up

In Plenary Session, follow-up was understood in different ways. Most participants interpreted it to mean '*follow-up in their domains of influence*': a few in terms of 'FAO-UNESCO *follow-up*'. Several participants indicated ways in which they believed their countries/institutions/organizations could undertake follow-up activities. One such was from SEAMEO which undertook to ensure that the deliberations of the Seminar and the flagship notion would be conveyed to its regional centre for agriculture based in the Philippines (SEARCA).

It was brought to the attention of FAO and UNESCO, on several occasions during the Seminar that their co-operation/resources would be sought. These may be identified as either capacity building – to which FAO or UNESCO might contribute – or the collation, analysis and dissemination of information on success stories and *innovations in ERD*, for which FAO and UNESCO, Bangkok might be suited. From observations made at this session of the Seminar, *both UN entities may expect requests for assistance in the interest of promoting* Education for Rural Development *(ERD).*

8. Closure of the Seminar

In a simple ceremony, the Seminar closed in an atmosphere of *lessons learned, complex but promising futures and conviviality.*

Selected contributions

Contributions of education to alleviating rural poverty

by **Yu Fuzeng**
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Abstract: The World Bank study carried out in 1998, on the reduction of poverty in China, identified the trends in poverty reduction that have been partly determined by larger macroeconomic trends. This paper also analyzes the role of education in poverty reduction in China from a macro perspective. It looks in detail at some of the major macroeconomic trends of the past 20 years and makes an analysis of the role that education plays in these trends and developments. The paper illustrates from the macro standpoint the contributions of basic education and adult education in rural areas, and higher education and vocational education in both rural and urban areas. It stresses that basic education in rural areas is the foundation for both macroeconomic trends, and other educational activities contributing to rural development. The paper also emphasizes that mere primary education in rural areas is insufficient to cope with the needs of rural development in the present world. It is necessary to prolong primary education to include junior secondary education in rural areas. Higher education and vocational education also have an essential role to play in rural development.

Poverty reduction in rural areas in China

The People's Republic of China was founded in 1949 with 540 million people; nearly 90 per cent of whom resided in rural areas. Through industrial development in the early years of the new Republic, the percentage of the rural population decreased to 80 per cent in 1960. There were no changes regarding the percentage of the population residing in rural areas in the 20 years from 1960 to 1980. Only after 1978, when China started its economic reform and practised the policy of opening up, has the percentage of the rural population kept decreasing. The percentage of the population in rural areas in China in 2000 was 63.9 per cent, which is 15 per cent lower than that in 1982 (see *Table 1*).

Table 1. The situation of the rural population

Year	Total population (100 million)	% of the rural population
1949	540	89.4
1960	667	80.3
1970	818	81.0
1982	1,010	79.4
1990	1,134	73.6
2000	1,266	63.9

Source: INRULED.

China is a developing country with a huge population but a low level of economic development. The per capita GDP in 1952, three years after the People's Republic of China was founded, was only 119 Yuan (RMB). It increased to 379 Yuan in 1978, thirty years after the founding of the new China (see *Table 2*). Therefore, the economic situation for the first 30 years for the greater number of people residing in rural areas was only subsistence level. In 1978, there were over 250 million of people in rural areas who were living in poverty, according to the national poverty level.

Table 2. GDP and per capita GDP by year

Year	GDP (100 million)	Per capita GDP (Yuan, RMB)
1952	679.0	119
1965	1,716.1	240
1975	2,997.3	327
1978	3,624.1	379
1985	8,964.4	855
1990	18,547.9	1,634
1995	58,478.1	4,854
2000	89,404.0	7,064

Source: INRULED.

The Chinese Government had, in the early 1980s, put forward a target for economic development that would mean that the Chinese people would lead a decent life by the end of the century, so that people would no longer fear a shortage of grain for food. In 1986, the Government, for the first time, put forward a policy on poverty reduction to overcome poverty in rural areas. It is estimated that the poverty rate in rural areas in 1978 was about 30 per cent.

The National Poverty Line, first presented 1986 in China, took the county as a unit of measurement. A county whose per capita GDP was less than 200 Yuan (RMB) was regarded as a poor county. A poor county could enjoy special financial support from central and provincial governments. About 200 counties were designated as poor counties in 1986. That is how the national poverty line was determined at the beginning. However, the monetary value of the national poverty line has changed along with the country's economic development (see *Table 3*).

Table 3. National Poverty Line

Year	Poverty line
1986	200
1990	300
1995	530
1998	635

Source: INRULED.

The National Poverty Line, which was worked out for targeting the rural poverty population, is a criterion for working purposes; it is not a criterion for measuring the living standards of individual people. Therefore, this poverty line is called the austere poverty line. However, it has been demonstrated that this national poverty line is a practical one for China. If the criteria were set too high and more of the population was included as people living in poverty, the policy of poverty reduction would not be as efficient, as the funds from governments are limited.

Because of better performance in macroeconomic growth and as governments attached more importance to poverty reduction, the rural population living in poverty had fallen to 80 million by the year of 1992, 14 years after the country started its policy of opening up and reform. The rural poverty rate in 1992 decreased to 9.5 per cent. To strengthen the policy of overcoming poverty in rural areas, the Central Government started a *Seven-year Poverty Reduction Plan* in 1994. The implementation of the plan resulted in a reduction from 80 million rural people living in poverty to 30 million by 2000.

The joint report entitled *A World Bank Country Study, China Overcoming Rural Poverty* that was undertaken as a *collaborative effort of the Leading Group of Poverty Reduction under the State Council of China,* UNDP and the *World Bank* in 1998, detailed the progress of poverty reduction achieved in rural areas in the 1990s.

Measured by both the national poverty line and the international poverty line, the percentage of the rural population living in poverty decreased remarkably in the 1990s. Though the difference regarding the numbers of the rural population living in poverty between the two poverty lines is very great, it is significant that both the rural poverty rates in the 1990s in China kept decreasing in general. According to the national poverty line, the percentage of the rural population living in poverty in 1998 is 4.9 per cent lower than that in 1990 and following the international poverty line the percentage of the rural population living in poverty in 1998 was 19.8 per cent lower than that in 1990 (see *Table 4)*. The World Bank set the international poverty line as US$1 per day per person.

Table 4. Population living in poverty during 1990-1998

	National Poverty Line			International Poverty Line	
	Poverty line (Yuan)	Rural population living in poverty (million)	% of rural population	Rural population living in poverty (million)	% of rural population
1990	300	85	9.5	280	31.3
1991	304	94	10.4	287	31.7
1992	317	80	8.8	274	30.1
1993	350	75	8.2	166	29.1
1994	440	70	7.6	237	25.9
1995	530	65	7.1	200	21.8
1996	580	58	6.3	138	15.0
1997	640	50	5.4	124	13.5
1998	635	42	4.6	106	11.5

Source: A World Bank Country Study, China overcoming rural poverty.

What are the macroeconomic trends that influence poverty reduction?

The macroeconomic trends that have been illustrated in detail in the following do not comprise all the trends that influence poverty reduction. The purpose of looking at some of the macroeconomic trends is to see the role of education in them.

There has been a debate on the relationship between aggregate growth and poverty, internationally. It is now widely recognized that growth is an important, but not sufficient, condition for poverty reduction. International experience has shown that the impact of growth on poverty reduction depends not only on the rate of growth, but also on the composition of growth, and on structural aspects of the economy that determine whether, and how, growth reaches the poor.

In China's case, growth in agriculture, growth in township enterprises, the increase in the migration of the rural labour force into the cities, and the increase in the funding by government for poverty reduction have all made essential contributions to poverty reduction in rural areas in China.

Growth in agriculture

While GDP in the past 20 years has been maintained at a more than 9 per cent increase annually, the output of agriculture has kept increasing at a high rate as well. The agriculture output in 1978 was only 3 times of that in 1952, but the agriculture output in 1999 is 14 times that in 1978. It is obvious that the growth rate in agriculture in the years of 1978-1999 is much higher than that in years of 1952-1978 (see *Table 5).*

Table 5. GDP and outputs of three industries during 1952-1999

Year	GDP 100 million	Per Capita GDP Yuan RMB	Outputs for three industries		
			Agriculture	Industry	Service
1952	679.0	119	342.9	141.8	194.3
1955	910.0	150	421.0	222.2	266.8
1960	1,457.0	218	340.7	648.2	468.1
1965	1,716.1	240	651.1	602.2	462.8
1970	2,252.7	275	793.3	912.2	547.2
1975	2,997.3	327	971.1	1,370.5	655.7
1978	3,624.1	379	1,018.4	1,745.2	860.5
1980	4,517.8	460	1,359.4	2,192.0	966.4
1985	8,964.4	855	2,541.6	3,866.6	2,556.2
1990	18,547.9	1,634	5,017.0	7,717.4	5,813.5
1995	58,478.1	4,854	11,993.0	28,537.9	17,947.2
1999	81,910.9	6,534	14,457.2	40,417.9	27,035.8

Source: A World Bank Country Study, China overcoming rural poverty.

The output of agriculture as a percentage of GDP in China was 50.5 per cent in 1952, and more than half of the GDP in China in that year came from agriculture. By the year 1999, the output of agriculture as a percentage of GDP had decreased to 17.7 per cent (see *Table 6*) but the output of agriculture in 1999 was 42 times that in 1952. The output of agriculture has kept increasing at a high rate even though it has been decreasing as a percentage of GDP. Therefore, while the economy in China was increasing at a high rate, it was not only industry that kept increasing at a high rate; agriculture also kept increasing at a high rate.

Table 6. GDP and output structure of three industries during 1952-1999

Year	GDP 100 million	Per Capita GDP Yuan RMB	Outputs for three industries		
			Agriculture	Industry	Service
1952	679.0	119	50.5	20.9	28.6
1955	910.0	150	46.3	24.4	29.3
1960	1,457.0	218	23.4	44.5	32.1
1965	1,716.1	240	37.9	35.1	27.0
1970	2,252.7	275	35.2	40.5	24.3
1975	2,997.3	327	32.4	45.7	21.9
1978	3,624.1	379	28.1	48.2	23.7
1980	4,517.8	460	30.1	48.5	21.4
1985	8,964.4	855	28.4	43.1	28.5
1990	18,547.9	1,634	27.1	41.6	31.3
1995	58,478.1	4,854	20.5	48.8	30.7
1999	81,910.9	6,534	17.7	49.3	33.0

Source: A World Bank Country Study, China overcoming rural poverty.

The study shows that the income for farmers in China in the 1990s came mainly from agriculture. As more than half of the rural household's net income per capita is still coming from agriculture, the growth in agriculture will certainly increase the income of farmers, contributing to poverty reduction (see *Table 7).*

Table 7. Percentage of rural household's net income per capita from agriculture

	1990	1991	1992	1993	1994	1995	1996	1997
Agriculture Total	62.8	61.3	58.5	59.1	58.4	58.0	57.1	55.9
Crop cultivation	*48.1*	*45.7*	*43.1*	*47.6*	*48.4*	*49.1*	*48.0*	*45.1*
Other agriculture	*14.7*	*15.6*	*15.4*	*11.5*	*10.0*	*8.9*	*9.1*	*10.8*

Note: Other agriculture includes forestry, aquaculture and animal husbandry. Agriculture total is the sum of crop production and other agriculture.

Source: A World Bank Country Study, China overcoming rural poverty

Table 7 also shows that the percentage of rural household's net income per capita from agriculture had decreased during 1990-1997, meaning that the sources of income for farmers has diversified gradually. However, as the total for agriculture in 1997 was still 55.9 per cent, (more than half of the income for farmers), agriculture will continue to play a major role regarding the income of farmers in the years to come in China.

Table 8 shows the proportion of the income for farmers coming from non-agricultural business. Although there was a general increase, the difference was not much during the 1990s. Therefore, the non-agricultural income for farmers constitutes an important part of the income of farmers, but it will not become the major source of income for farmers in the short term.

Table 8. Percentage of rural household net income per capita from wage earnings and transfer

	1990	1991	1992	1993	1994	1995	1996	1997
Wages	20.2	—	23.5	21.1	21.5	22.4	23.4	24.6
Transfer	3.6	—	3.9	3.7	3.9	3.6	3.6	3.8

Source: A World Bank Country Study, China overcoming rural poverty

The growth in township enterprises

Industrial enterprises are usually located in cities throughout the world. In China the industrial and service enterprises located in rural areas and run by farmers are called township enterprises.

Industrial enterprises located in rural areas and run by farmers in China started in 1958. However, the expansion of township enterprises was constrained by the country's policy until 1978, when the policy of opening up and reform started being put into practice. For the period of 20 years from 1958 to 1978, the number of township enterprises set up was 1.52 million, employing 28.3 million of workers with a total output as 49.1 billion Yuan (RMB). In the period of 22 years from 1978 to 2000, the numbers of township enterprises set up was 19.3 million, employing 128.2 million workers, with a total output of 2715.6 billions Yuan (RMB) (see *Table 9)*. The numbers of township enterprises set up during 1978-2000 was more than 12 times that during 1958-1978. The output of township enterprises for 2000 accounts for 31 per cent of GDP of the country. The township industry has become a major part of the country's economy.

Table 9. Township enterprises and workers employed

	Enterprises set up ('0000)	Workers employed ('0000)	Total output (billion Yuan)
1978	152	2,826	49.1
1985	1,222	6,978	772
1990	1,873	9,262	250.4
1995	2,203	12,861	1,459.5
2000	2,084	12,819	2,715.6

Source: INRULED.

Township enterprises do not only contribute to the GDP of the country, they also assist large numbers of surplus rural labour force personnel to become workers in industrial and service trades, thus helping rural development. In 2000 there were about 120 million former farmers working in township enterprises, providing one more source of income for 120 million farmers whose incomes were totally coming from agriculture, before they became workers in township enterprises. According to statistics, the proportion of farmers' net income that comes from non-agricultural business was 44.7 per cent in 2001 and, in 1989, the proportion was only 23.7 per cent.

Setting up township enterprises has been a very important development in China that has made great contributions to rural development, including helping to overcome poverty in rural areas.

The rural labour force migrating to cities

There is nothing new in rural labour forces migrating into cities. It happened many years ago in developed countries and the process is going on in developing countries. However, what happens regarding the migration of the rural labour force in China is different. China practised a rationing system regarding grain supply for all people in the country until the1980s. It was then not possible for rural people to freely migrate to the cities. In 1978, a new policy for farmers was put into practice and, as a result of that, crop production increased greatly. When there was grain available from the markets, it was possible for rural people to freely migrate to the cities. Rural people migrating to the cities usually set up businesses on their own or were employed in enterprises located in cities. It is estimated about 50 million rural people have migrated to the cities. However, these people had their own cultivated land, where they were formerly living. After migrating to the cities, some had their land cultivated by others, but many had to come back to take care of their crops during the busy seasons. However, as many rural people have their own business and fixed job in cities, more and more migrating rural people have settled in cities. According to statistics, the urban population has been maintaining a faster growth rate in the past 20 years than in the 30 years, following the founding of the new China. The urban population in 1980 accounted for 20.6 per cent of the total population, with an increase to 26.4 per cent in 1990 and, in 2000, the urban population accounted for 36.1 per cent of the total population.

It is a law of development that as the *economy is developing*, the *rural population is decreasing* and the *urban population increasing*. But urbanization that moves rural poverty into urban poverty does not solve the poverty problem of a country. How to ensure that those who migrate into cities do not end up in poverty is a problem to be tackled.

Central and local government funds for poverty reduction

Financial support from governments is a decisive factor in poverty reduction. As the factors that contribute to poverty are many, it is essential for governments to be the first to improve conditions and infrastructures so as to create conditions for economic growth in the area.

Table 10 shows the total poverty reduction funds provided by Central Government during 1986-1999. China started to set aside the special funds for poverty reduction in 1986.

Table 10. Central Government poverty reduction funding (million Yuan)

Year	State Poverty Alleviation Loan Funds	Ministry of Finance Grant Funds	Food for Work Funds	Total Poverty Reduction Programme Funds		
				Yuan Current	Yuan Constant 1997	US$ Current
1986	2,900	1,000	900	4,800	14,583	1,500
1987	3,000	1,000	900	4,900	14,018	1,321
1988	3,050	1,000	—	4,050	9,860	1,092
1989	3,050	1,000	100	4,150	8,469	1,119
1990	3,050	1,000	600	4,650	9,081	985
1991	3,550	1,060	1,800	6,410	12,237	1,205
1992	3,550	1,120	1,600	6,270	11,432	1,157
1993	3,550	1,130	3,000	7,730	11,396	1,349
1994	4,500	1,240	4,000	9,790	12,722	1,152

1995	4,550	1,300	4,000	9,850	10,894	1,187
1996	5,500	1,300	3,000	9,800	10,045	1,183
1997	8,450	2,815	4,000	15,265	15,265	1,839
1998	10,000	3,315	5,000	18,315	18,773	2,207
1999	9,700	3,315	5,000	24,800	26,056	2,988
Total	68,450	21,635	33,900	130,780	185,830	20,280

Source: A World Bank Country Study, China overcoming rural poverty.

The total funds for poverty reduction in the 14 years from 1986 to 1999 were US$20.3 billion. The funds increased greatly after 1997, when the number of counties that were designated as poor counties increased, as the criterion for the national poverty line was raised. The funds available for poverty reduction for 1999 were US$3 billion, which is twice that of 1986.

Local governments have usually subsidized the funds from Central Government for poverty reduction. For instance, the *National Poverty Reduction Conference*, 1996, stipulated that the provinces and lower governments should provide matching funds to an amount of 50 per cent of the national loan funds.

What are the funds used for in poor counties?

Take the *Seven-year Poverty Reduction Plan* as an example. In the period of implementation of the plan, poverty reduction funds helped to provide 400 million hectares of cultivated land, 320 thousand kilometers of highways, 360 thousand kilometres of electricity transmission lines, and solved the problem of drinking water for 54 million people and 48 million domestic animals. Thanks to infrastructure improvement, 95.5 per cent, 89 per cent, 69 per cent and 67.7 per cent of administrative villages have been reached and connected by, respectively, electricity, fencing, roads and telephone lines in all the poor counties. During the life of the plan, economic development in these poor counties has accelerated, with agriculture output increased 54 per cent; industry output increased 99.3 per cent, an annual average increase of 12.2 per cent; local financial revenue increased close to 100 per cent, an annual average increase of 12.9 per cent; grain produced increased 12.3 per cent, an annual increase of 1.9 per cent; and household net income per capita increased from 648 Yuan (RMB) to 1337 Yuan (RMB), an annual increase of 12.8 per cent. All these rates of increase in the poor counties are higher than the national average increase.

Some funds from the Governments' poverty reduction fund have been used for education purpose, as the projects that have been implemented for the purpose of poverty reduction have always been accompanied by educational training. Besides, governments have allocated separate funds for strengthening compulsory education in rural areas, including the designated poor counties.

The contribution of education to rural development

Education that contributes to rural development includes basic education (including literacy education), rural adult education, vocational education and higher education.

The contribution of basic education to rural development

(a) Developing basic education

The starting point for basic education development in China was at a very low level as 80 per cent of people were illiterate and the ratio in primary education was less than 20 per cent. The policy of basic education for the new China is to ensure that all school age children go to school. This was not easy for a country with more than 540 million in 1949 and a very low level of economic development. The per capita GDP in 1952, three years after the founding of the new China, was only 119 Yuan (RMB). However, with the concerted efforts of the whole society, under the strong leadership of the central government, more and more school age children were able to go school. The ratio of children in primary education in 1952 was 49.2 per cent and by 1965 the ratio of children in primary education had increased to 84.7 per cent (see *Table 11*). This was very important progress, which was made in the 15 years after the founding of new China, and laid a solid foundation for the further expansion of primary education. Even in 1965 the per capita GDP in China was only 240 Yuan (RMB). At such a level of per capita GDP, the majority of rural people could only lead a meagre life style, but they managed to have their children attend primary schools.

Table 11. Ratio of primary education in 1952-2000

Year	Per capita GDP	Ratio of primary
1952	119	49.2
1955	150	53.8
1960	218	76.4
1965	240	84.7
1975	327	95.0
1978	379	94.0
1980	460	93.0
1985	855	95.9
1990	1,634	97.8
1995	4,854	98.5
2000	7,000	99.1

Basic education in China includes primary education and junior secondary education. Based on the development of primary education, junior secondary education has also been well developed. Due to the small number of pupils finishing primary education in 1952, the ratio of primary education finishers continuing onto junior secondary education was very high. As the ratio of primary education increased and enrolment in primary education expanded, the ratio of primary education finishers continuing on to junior secondary education was not as high as that of 1952.

However, the ratio of primary education finishers going on to junior secondary education was maintained at more than 80 per cent from 1965 to 1978. The ratio of primary education finishers going on to junior secondary education in 1985 was the lowest in more than 30 years. When in 1985

9-year compulsory education became the policy of government on education, the ratio of primary education finishers going on to secondary education kept increasing. By the year 2000, 94.9 per cent of primary education finishers went on to secondary education (see *Table 12*).

Table 12. Ratio of junior secondary education in 1952-2000

Year	Per capita GDP	Ratio of primary education finishers continuing on to junior secondary
1952	119	96.0
1955	150	—
1960	218	—
1965	240	82.5
1971	288	89.7
1975	327	90.0
1978	379	87.7
1980	460	75.9
1985	855	68.4
1990	1,634	74.6
1995	4,854	90.8
2000	89,404	94.9

As a result of basic education development in China, education attainment among people aged 15 and above has improved gradually. In 1982 the illiteracy rate was 23.6 per cent. Almost one quarter of adults in China was illiterate and the rate of illiteracy for rural people would have been even higher than that. In 2000, the illiteracy rate was only 6.7 per cent. From 1982-2000, the number of those with primary education attainment in every ten thousand person did not change much. But the numbers of those with junior secondary education in 2000 was almost twice that of 1982 (see *Table 13*).

Table 13. Education attainment of people aged 15 and above (for every 100,000)

Year	Rate of illiteracy	Primary	Junior secondary	Senior secondary	Post-secondary
1982	23.6	35,256	17,884	6,784	617
1987	20.6	36,114	21,322	6,996	884
1990	15.9	37,057	23,344	8,039	1,422
2000	6.7	35,701	33,961	11,146	3,611

The progress of basic education in China constitutes one of the major factors contributing to the development of township enterprises, migration of rural labour force and the growth of agriculture.

(b) The contribution of basic education to the development of township enterprises

A survey completed in 1997 in Zhejiang Provinces (which is among the provinces with the most developed township enterprises in China) showed that the education attainment for 96.8 per cent of owners and managers in township enterprises was junior secondary education and higher. The education attainment for 70.1 per cent of workers working in township enterprises was junior secondary education and higher and 29.9 per cent of workers working in township enterprises completed only primary education (see *Table 14*). This means that the education attainment of more than 70 per cent of people working in township enterprises was at least at the junior secondary education level. This is the education situation for the operation of township enterprises.

Table 14. Education attainment of people in township enterprises

	Primary	Junior S.	Senior S.	College
Owners and managers	3.2	36.9	34.8	25.1
Workers	29.9	46.7	23.4	—

Another survey completed in Jiangsu Province (which is also among the provinces with the most developed township enterprises in China) shows that the education attainment for 90.9 per cent of people working in township enterprises was junior secondary education and higher. The educational attainment for 56.2 per cent of farmers was junior secondary education and higher, with only 11 per cent of farmers having attained senior secondary education and higher. levels. This demonstrates once again that the education attainment of most people working in township enterprises was at the junior secondary education level. It also shows that the education attainment for almost a half of the farmers was at the level of primary education or less. The education attainment of people in township enterprises is obviously higher than that for those in agriculture (see *Table 15).*

Table 15. Education attainment for workers and farmers

	Junior S.	Senior S.	College	Total
Workers (1996)	39.6	46.7	4.6	90.9
Farmers (1998)	45.0	10.8	0.4	56.2

(c) The contribution of basic education to the migration of the rural labour force

A survey of the migration of the rural labour force in 2001 in Shangdong Province which has more than 90 million people showed that only 0.7 per cent of the migrant labour force is illiterate or semi-illiterate. The educational attainment for 9.4 per cent of this population was primary education; 63 per cent of them had completed junior secondary education; and 27 per cent of them completed senior secondary education. That is to say that 90 per cent of the migrant rural labour force had completed junior secondary education or above. All rural people in China receive their primary and junior secondary education in schools located in rural areas and there are some senior secondary schools located in rural areas for rural students.

There is basically no unemployment for the rural labour force migrating into cities in China. Their education attainment ensures that they find jobs in cities and towns. The purpose of their migrating into cities and towns is to make money to add to the income of their families in rural areas. Some have gradually become urban citizens. Hence, the completion of the process of migration into cities and towns by the rural labour force. It is expected that more migrant rural people will become urban citizens, because it is the policy of government to promote urbanization.

In the process of urbanization in China, the basic education of the migrant rural labour force is received in rural areas. The expense of basic education in rural areas is lower than that in cities. This is a considerable contribution by rural education to the modernization of the country.

(d) The contribution of basic education to the growth of agriculture

Though the education attainment of farmers working in agriculture is generally lower that those working in township enterprises or migrating into cities and towns (see *Table 15*), the education attainment for most farmers in the 1990s in China was at least at the level of primary education, and more than 50 per cent at an even higher level. This is the foundation for carrying out adult education in rural areas. Adult education is the key to the growth of agriculture, as new methods and skills in agriculture cultivation play a more and more important role for improving productivity in agriculture.

Farmers have been engaging in crop farming following the old traditions. However, it is not possible to raise the yield, if they refuse to use quality seed and new skills in farming. Learning new methods and skills in farming at present has become the essential condition for doing a good job in crop production.

Crop cultivation constitutes only part of agriculture in rural areas. Forestry, aquaculture, husbandry, vegetables, flowers and plants all need to be developed, along with agriculture development in rural areas. Farmers in rural areas are not familiar with all these areas that require more training for professional development. Therefore, training has become the key to their development and basic education and is the foundation for carrying out this training.

The contributions of higher education and vocational education to rural development

Higher education and vocational education contribute to rural development in China, especially agriculture institutions of higher learning and agriculture schools at senior secondary level. The practice in China has shown that their contributions to rural development are also essential.

(a) Developing higher education in agriculture and agriculture vocational education

As most of the people in China reside in rural areas, the Chinese Government has attached importance to agriculture higher education and agriculture vocational education.

There were only 18 institutions of higher learning in agriculture and forestry in 1947, before the founding of new China. In 1957 the number of institutions of higher learning in agriculture and forestry increased to 31, their enrolment was 441,000, that is almost three times that of 1947, accounting for 9.1 per cent of the total enrolments of all institutions of higher learning in 1957. Except for the year 1975 (which was in the period of the Cultural Revolution in China, when all institutions of higher learning were closed) the enrolments in agriculture and forestry have kept increasing. The total enrolments in agriculture and forestry in 2000 were already more than 12 times that of 1957 (see *Table 16)*. Human resources in agriculture and forestry have staffed research institutions of agriculture all over the country, which have made important contributions to rural development, by developing goods and new skills for agriculture development and extending new skills to rural areas.

As running institutions of higher learning in agriculture is more expensive, the government has supported all of them financially. Therefore the past 50 years have witnessed steady development in higher education in agriculture.

Table 16. Enrolments in higher education for agriculture ('000)

Year	Institutions	Total enrolment	Enrolment for agriculture	% of the total
1947	18	154	10	6.6
1957	31	441	40	9.1
1965	53	674	63	9.4
1975	43	501	42	8.4
1980	66	1,144	82	7.2
1993	70	2,536	119	4.7
2000	50	5,561	182	3.3

Agriculture secondary schools were set up in the early years of the new China. All of them have developed into agriculture secondary schools at senior secondary school level. The number of these schools increased greatly in the 1980s. Every province had about 10 such schools on average, showing the importance attached by local governments to agriculture development. The enrolments in these schools accounted for around 15 per cent of total enrolments of all secondary technical schools to 1980. After that enrolments in agriculture, as a percentage of the total, have decreased but the total enrolments in agriculture kept increasing, in general. The graduates from these schools have usually become technicians in agriculture, working in institutions serving rural development. Another contribution of these schools is to play an exemplary role in reform and experimentation in farming, because their location is more close to rural areas.

The Government has financially supported schools, and their students have usually been assigned jobs upon graduation by the government. It is the

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case, therefore, that stable development for these schools has been ensured for the past 50 years (see *Table 17)*.

Table 17. Enrolments for agriculture in secondary schools ('000)

Year	Institutions	Total enrolment	Enrolment for agriculture	% of the total
1946	273	137	50	36.5
1957	173	482	99	20.5
1965	144	392	54	13.8
1975	227	405	65	16.0
1980	373	761	126	16.6
1993	428	2,820	296	10.5
2000	360	4,895	242	4.9

Another kind of vocational school, which is located in rural areas and has played almost the same role for rural development as agriculture schools, are vocational schools at senior high school level. In addition, these vocational schools can serve rural development by providing adult training for farmers, because of their location in rural areas.

(b) The contribution of higher education in agriculture and agriculture vocational education to the growth of agriculture

The direct contributions of higher education institutions and agriculture vocational schools to the growth of agriculture are very extensive. For instance:

- providing information and consultancy for policy development;
- developing quality seed;
- developing new skills for farming;
- promoting extension in agriculture;
- playing an exemplary role for farming;
- providing training for farmers.

The contribution of adult education in rural areas to rural development

Given the situation that the majority of farmers have received basic education, adult education in rural areas can play a very important role in the growth of agriculture.

The most important feature of adult education in rural areas is closely related to agriculture production. For instance:

- adult training for using quality seed;
- adult training for using new skills for farming;
- adult training as an integral part of projects implemented in rural areas.

What is the mechanism for providing adult training in rural areas?

- projects sponsors including adult training as an integral part of projects;
- agriculture institutions of higher learning;
- TV universities (network);
- agriculture secondary schools;
- broadcasting and TV agriculture schools (network);
- vocational schools located in rural areas;
- adult schools located in villages.

Supporting rural education for poverty reduction: issues and approaches

by **Chris A. Spohr**
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1. Introduction

In a keynote address at the recent *World Summit on Sustainable Development* (WSSD), the Director-General of FAO, Dr Jacques Diouf, announced four priorities for the new *FAO-UNESCO Education for Rural People* initiative: (i) elevate rural education in national planning agendas as the frontline of the *Education for All* (EFA) drive, and build needed national capacity; (ii) expand access, including via use of *Information and Communication Technology* (ICT), *Non-Formal Education* (NFE), and support for child nutrition; (iii) improve relevance via teacher training and development of new curricula addressing rural needs (e.g. education on life skills, nutrition, and HIV/AIDS); and (iv) forge new links between international and national proponents of change.

To promote the first of these objectives, this paper first overviews *evidence justifying government and donor prioritization of rural education.* Some broad shifts in ADB support for education are then outlined, which increasingly aligns with the priority areas noted above. Thereafter, the paper briefly discusses some emerging issues and challenges in the areas of *policy, access, and quality/relevance, as well as approaches the ADB has taken.* Specific examples are drawn upon (mostly from countries represented at the Seminar), including a discussion of the promise and challenges of ICT in rural education: a topic less likely to be covered by other presenters, but one of increasing importance which also illustrates several of the other issues raised in this paper.

2. The importance of basic and rural education

The *Universal Declaration of Human Rights* (UDHR), 1948, affirmed that all children have the right to free education, at least at the elementary level. More recently, evidence emerging from a variety of fields has demonstrated education to be a key determinant of social development. Basic education – for simplicity, defined herein as primary and lower secondary schooling, plus NFE to provide literacy, numeracy, and basic life skills to marginalized populations – appears particularly critical.[1] The impact of basic education on individual incomes appears fairly robust to estimation across developing economies (Psacharopoulos, 1994) or to the introduction of more advanced econometric techniques designed to address the so-called 'endogeneity critique'.[2] Evidence also indicates that basic education affects not only wages, but also broader workforce outcomes such as participation in the formal labour market, work in more modern sectors, and (particularly for women) ability to earn regular income from work (Spohr, 2002).

The impact of education extends well beyond effects on individuals' workforce outcomes. Literacy and formal schooling are linked with reduced fertility rates, improved health and sanitation practices, and increased ability to access information and participate in various social and economic processes. Educated parents also tend to invest more in children's schooling, health/ nutrition, and human capital measures important for future well being. Ensuring women's access to basic education (see *Appendix I*) appears to play a particularly key role in societies' transition from a vicious cycle – an intra-generational poverty trap combining high birth rates, high maternal and infant mortality rates, and stagnant productivity – to a virtuous cycle characterized by investment in child quality rather than quantity.[3]

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1. Even in purely economic terms, it is generally held that the returns to basic education are highest (relative to other levels) at least in early to mid-stages of development, with upper secondary and tertiary education growing in importance at later stages (Mingat; Tan, 1996). See Shirur (1995) on the benefits of literacy and NFE.
2. This critique holds that individuals' educational attainment is likely to reflect unobserved characteristics such as innate talent, attitudes, family background, or local environment, which additionally influence income, hence corrupting simple regression analysis. See Duflo (1998) for the case of Indonesia.
3. See Pitt et al. (1990) and Birdsall; Sabot (1993).

2.1 The role of governments and the international community

There are thus strong justifications for investing in increased access to and quality of basic education in terms of both economic and broader social benefits. As implied above, basic education is integral to overcoming the multiple facets of poverty (Sen, 1981), a declared priority of many governments and international donors such as ADB. Strictly speaking, the allocation of public and donor funds should be driven not purely by relative contribution to development (however measured), but by where this can exert the greatest impact rather than crowding out private resources. Here again, though, economics presents strong arguments for investments to universalize basic education. *First*, whereas the private returns to upper secondary and especially tertiary education exceed the social returns, meaning that individuals have more incentive to invest and capture more of the benefits, basic education is largely a public good. *Second*, though equally important, is the question of equity, arising in part from the fact that per pupil costs rise sharply with the level of education, while, in practice, the pool of potential entrants is restricted to an increasingly elite minority.[4]

Finally, in looking at public investment, there is the interrelated question of efficiency: namely, private sector delivery of education at more advanced levels, with demand coming from paying consumers, puts dual pressures on efficiency. Of course, there remain justifications for targeted donor/public support where tertiary institutions play a key supportive role in the sector (e.g. teacher training), as well as for scholarships and other support to ensure that the poor, women, and other disadvantaged groups have access to post-basic levels of education.

2.2 Supporting rural education

As noted at the World Education Forum in Dakar, 26-28 April 2000, achieving EFA increasingly means targeting rural areas. Beyond this, there are numerous reasons why investing in **rural** education should be a particular priority for governments and donors, in terms of both benefits and the burden of financing access. Namely, there is a strong 'urban bias' in the availability of private (and too often also public) resources for education, while the challenges of providing physical access to nearby schools and ensuring education quality tend to be much greater in rural communities. As illustrated in the case of China (*Box 1*), recent changes affecting the developing world arguably place a still greater premium on rural basic education. It is hoped that the landmark FAO-UNESCO/IIEP study will provide compelling evidence to policy-makers, and touch off increased multidisciplinary research efforts.

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[4] For example, ADB (2001b) notes that on average in 1995, China, South Korea, Lao PDR, Malaysia, Nepal, Philippines, Taiwan, and Thailand allocated 14 per cent of public education spending to tertiary education: one-third of the share spent on primary schooling, which accounted for 7 times as many students (including private enrolment).

Box 1. Education in rural China

Amidst broader trends, basic education remains critical to rural development in China:

- It is critical for rural residents' employment mobility and access to better jobs (Yang, 1997).
- It is key to preparing youth to assume evolving civic responsibilities (e.g. "village democracy")
- New IFPRI research (Fan et al., 2002) indicates that education is the most effective form of public investment for reducing poverty in the poorer, largely rural, Western Region; and
- The impact of both WTO entry and cumulative environmental degradation on rural livelihoods increase the need for access to relevant basic education (including NFE).

However, access to quality basic education in rural areas also faces new risks, as financial burdens on local governments and households have accelerated since China's major education decentralization reform in 1985. A sweeping "tax-for-fee" reform being phased in may profoundly affect budgeting for 9-year compulsory education, to be studied in a proposed ADB technical assistance (TA, see Section 4.3a).

At the same time, it is clear that compelling evidence alone does not guarantee ample and effective support for rural education. Moreover, there are no 'magic bullets'. Privatization or promotion of an active private sector role tends to be much less viable in poor and rural areas, with the notable exception of NGOs. Also, as noted below, decentralization and/or devolution of budgetary and management responsibilities pose both opportunities and challenges, and shifting investment to costly forms of ICT may exacerbate inequity. In short, donors, governments (including ministries of both education and rural development), and other stakeholders must work together to ensure progress in meeting priority education needs in rural localities.

3. ADB's changing role in supporting education

ADB has invested roughly US$5.3 billion for education in its D*eveloping* M*ember* C*ountries* (DMCs) since its first education loan in 1970. Two-thirds of this support has come after 1991, indicating an acceleration in absolute terms, though the share of education lending in total ADB loan amounts has remained steady at roughly 6 per cent.[5] However, approval of a new policy paper on *Education and Development in Asia and the Pacific* (which recognizes basic education as a human right) in 1988 led to a dramatic redirection in ADB education assistance from mostly tertiary and technical/vocational education to basic education. Prioritization of basic education was redoubled with ADB's adoption of its *Poverty Reduction Strategy* in 1999 and *Long-term Strategic Framework* in 2000, which commits ADB to promoting the eight *Millennium Development Goals* (MDGs).[6] It is also reaffirmed in ADB's new *Policy on Education* (covering 2002-2007), and the vision statement and objectives set down therein (see *Box 2).*

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[5] In terms of numbers of loans, education projects account for roughly 10 per cent of all projects.

[6] Declared at the *United Nations Millennium Summit* in September 2000, the MDGs and their targets include universalizing primary education and promoting gender equality (including in education) and female empowerment.

Box 2. ADB's Policy on Education (approved August 2002)

The culmination of a series of regional technical assistance activities involving 8 DMCs, including 4 Seminar participants (China, Indonesia, Philippines, and Viet Nam), the new education policy declares ADB's vision for education, that "All children and adults will have equitable access to and complete education of sufficient quality to empower them to break the poverty cycle, to improve their quality of life, and to participate effectively in national development."

It also sets down 3 principal priorities – (i) reducing poverty, (ii) enhancing the status of women, and (iii) facilitating economic growth – as well as six subsidiary priorities linked to achieving these:

- Increasing equity, access, and retention, especially for the poor, women, and other marginalized groups.
- Improving the quality of education.
- Strengthening management, governance, and efficiency, and elevating stakeholder participation.
- Mobilizing resources for sustainable education delivery, in particular facilitating the role of the private sector, while protecting access by the poor to affordable basic education.
- Strengthening collaboration with partners and beneficiaries.
- Emphasizing experimentation with, and dissemination of, innovative strategies and technologies.

In addition to shifting its priorities to basic education as a key to social development and poverty reduction, ADB has increasingly adopted more comprehensive and pragmatic approaches. *First*, to increase the long-term impact of its education assistance, ADB has sought to establish stronger links between projects and policy. This means placing greater emphasis on reforms and building a solid national policy framework. *Second,* while not always possible under its mainstream assistance modalities, ADB is looking for ways to integrate education into assistance in other sectors, including rural development.[7] In addition, in contrast to formulaic or 'cookie-cutter' approaches, ADB increasingly recognizes the need to adopt more flexible approaches, tailoring assistance and implementation strategies to specific contexts.

ADB's introduction of new assistance modalities in various sectors complements these shifts. To increase the policy impact of loan-based support, *Sector Development Programmes* (SDPs) combine: (i) a quick-disbursing loan to broadly support sector- or subsector-wide policy strengthening, and (ii) a more concrete project loan intended to catalyze the sectoral changes promoted. The most recent example in education involves support for primary and secondary education reform in Uzbekistan. Another emerging modality, the *Sector-Wide Approach* (SWAp), entails agreement by all donors to a common and government-led education framework. The ADB-assisted *Education Sector Development* Programme (ESDP) in Cambodia represents the first SWAp for education in Asia; another is currently being discussed in Mongolia.

Finally, in addition to a drive for more strategic and effective use of ADB's grant-funded technical assistance (TA),[8] the Bank has already in some cases tapped new grant-based tools to sharpen its role in regional education. These include the *Japan Fund for Poverty Reduction* (JFPR), *Japan Fund for ICT* (JFICT), and the *Department for International Development* (DFID), UK, *Poverty Reduction Fund.* Despite tight constraints on grant funds and other challenges, these new modalities should augment ADB's ability to pursue innovative and sharply poverty-focused approaches. For example, the JFPR-funded *Targeted Assistance for Education of Poor Girls and Indigenous Children*, attached to the ESDP loan in Cambodia, will augment the ESDP's pro-equity impact by piloting community-managed scholarship schemes and increasing girls' and minorities' access to lower secondary schooling in poor rural areas. These new modalities will also allow collaboration with a broader range of partners (i.e. NGOs), and increased flexibility to integrate education into multi-faceted approaches, as in the case of the *Community-Based Gender Sensitive Basic Education for the Poor* pilot project in Afghanistan, which will work with the Government and NGOs to provide access to schooling and NFE. These modalities can have a critical impact on the efficacy of ADB support for rural education and development, as ADB (like many other donors) has been largely unable to provide multi-sector assistance spanning education and agriculture/rural development ministries to date.

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[7] Examples include two recent Cambodia projects: the *Basic Skills Project*, in partnership with the ministries of education and health, and the ongoing *Northwestern Rural Development Project*, under the Ministry of Rural Development, but including local capacity building and cross-sector collaboration to support new rural schools.

[8] Since 1970, ADB has provided nearly $120 million in TA for the education sector, 80 per cent of this since 1991.

4. Issues and approaches

Although ADB's new Policy for Education does not explicitly target rural areas, it is clear that these are very much the frontline in the Bank's efforts to promote equity in access to quality education in most, if not all, of its DMCs. However, ADB also recognizes that targeting the 'hard-to-reach' introduces new challenges. This section outlines several of these difficulties, as encountered in specific ADB-assisted projects. It attempts to provide a balanced and open discussion, rather than focusing on only 'success stories'. The cases noted thus introduce some of the innovative approaches ADB is trying out, but also highlight important obstacles encountered, as these lessons are also critical to learning and strengthening future project design and policy.

4.1 Access, quality, and efficiency

One major question is how ADB can help *lower barriers to rural enrolment*. To address perhaps the most daunting of these, the direct costs of schooling, an ADB-assisted project in Lao PDR (*Box 3*), for example, targets financial assistance to ethnic minority girls. At the same time, "opportunity costs" may also be formidable: time spent in school conflicts with children's ability to contribute to the family via household responsibilities or child labour in either the formal workforce (which ADB strongly opposes) or in the family farm or small business. Particularly in large families, in-home duties may pose a particular obstacle to enrolling girls, most often tasked with caring for younger siblings. While education projects cannot eliminate opportunity costs, it is generally believed that improving the quality and relevance of education available near to the home is the best way to convince parents to place and keep their children in school.[9]

However, it is very difficult to simultaneously increase access to local schools and school quality, given the need to efficiently allocate limited public and aid resources. ADB is not alone in this respect. For example, a study by Beynon *et al.* (2000) for DFID and the World Bank finds a stark dilemma between quality and access in supporting education in rural China: concentrating resources in centralized, complete primary schools – deemed important for quality and efficiency – came at the price of access by many poor children in remote areas, due to closure of local (often incomplete) schools. In many societies, closing local schools may disproportionately affect girls and minorities by creating distance and language barriers, respectively.

There is no ready-made solution to such dilemmas. In the Lao context, the Basic Education (Girls) Project has shown some promise to date (*Box 3*). It is hoped that sharing between governments and donors of knowledge and lessons learned from various approaches will help inform future projects and, more importantly, policies.

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9. Distance to schools not only tends to raise direct costs (e.g. transportation, food, etc.), but also opportunity costs. The need to travel long distances often has a disproportionate effect on girls' enrolment, due in part to social norms.

Box 3. Innovation to increase female and minority enrolments in rural Lao PDR

Innovations under the Basic Education (Girls) Project in Lao PDR followed from substantial research and dialogue (involving multiple levels of Government) into education needs of the rural poor. Key design features include:

- provincial-level capacity building to support school construction and development programmes;
- support for effective and efficient multi-grade schools, and promotion of stakeholder participation in school management, ranging from the Lao Women's Union to village committees;
- targeted financial assistance to cover clothing, shoes, exercise books, etc. for poor minority girls;
- recruitment of new minority teachers (mostly females) using scholarships, in-kind support, etc.;
- teacher training in the use of adapted materials and curricula (e.g. life skills), and in removing gender stereotypes; and
- emphasis on supervision, monitoring, and evaluation.

Despite experiencing some challenges associated with such innovations, including implementation delays, the Project maintains good prospects for improving equity and quality in rural education.

4.2 Providing basic education outside the formal system

In many countries, at least in the medium term, NFE will be a critical tool in providing poor and marginalized groups with functional literacy and other skills critical for participation in society. NFE typically has two overlapping target groups, the balance of which varies across countries: (i) school-age youth not attending school, often due to a combination of direct and opportunity costs outlined above and; (ii) poorly educated adults. While there exist sizeable pockets of the hard-to-reach in urban areas (e.g. street children, urban squatters, and migrant labourers), the need for NFE is greatest in rural areas for a combination of reasons. At the micro- extreme, these include the higher prevalence in rural areas of household risk factors affecting enrolment: e.g. poverty, poor health leading to drop-out, and the need for children to work in the fields or carry water or firewood over long distances. Rural areas also suffer from greater constraints in the school system, such as inadequate funding (often exacerbated by decentralization, as discussed below), distance between complete and/or high quality schools, and perceived irrelevance of urban-oriented curricula. At a still broader level, the rural poor suffer from remoteness from information sources, a gap that NFE can help fill.

ADB has most actively supported NFE through partnerships with NGOs in Bangladesh (with a second NFE project soon to commence) and the Philippines. The latter case, described in *Box 4*, is particularly interesting, as it illustrates the challenges of institution building.[10]

Box 4. The ADB-assisted Philippines Non-formal Education Project (PNEP)

The PNEP consisted of two principal thrusts, the Functional Education and Literacy Programme (FELP) and a programme targeting *Out-Of-School Youth* (OSY) that became known as the *Accreditation and Equivalency* Programme (A&E).

Breakthroughs. Perhaps the most significant accomplishment made by the Department of Education (formerly DECS) and the *Bureau of Non-formal Education* (BNFE) under the Project was to establish a working model for decentralized NFE delivery, with *Service Providers* (SPs) comprised primarily of NGOs and academic institutions, such that the role of the Government shifted from direct provision to setting the overall strategic framework, curriculum design and development of the bulk of materials, overall guidance and quality assurance, and monitoring and evaluation. Other successes included:

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[10] By contrast, ADB's initial assistance for NFE in Bangladesh focused more on securing and extending progress made within a well-established NFE system, in partnership with leading NGOs.

- physical targets achieved – 465,913 FELP and 71,505 A&E learners reached, with 5,014 A&E learners achieving elementary- or secondary-level certificates;
- a small-scale survey conducted in one very poor area of Manila and in three rural provinces indicates substantial benefits of FELP in terms of empowerment (especially for women), new independence (including entrepreneurship), and greater parental role in children's education and well-being;
- A&E awarded a UNESCO *Noma International Literacy Prize for 2000*;
- key legislation passed, stating that secondary-level A&E examination is legally recognized for purposes of civil service employment and entry into public vocational institutions and colleges;
- capacity built in national and local government and SPs, though follow-up efforts needed;
- some SPs showed flexibility and efficacy in tailoring delivery to local needs (e.g. adapting materials and recruiting past learners as local "para-teachers"), despite some criticisms of the move to rely on less locally-sensitive "umbrella" NGOs – the future goal is to ensure that all SPs emulate successful approaches exhibited.

Dilemmas, challenges, and shortfalls. ADB feels its partnership with DECS-BNFE was very successful in creating a solid model for fulfilling a critical need for education among underserved poor and largely rural populations, including several of the Philippines' indigenous peoples. The Bank very much hopes to build on this relationship via future support. At the same time, it is important to recognize difficulties that emerged, perhaps the most telling being sustainability and the failure to fully institutionalize NFE nationwide with adequate budgetary commitment. While related legislation has been pending since the latter stages of the Project, most SPs discontinued activities once in-Project contracts ran out. At present, NFE garners only 0.07 per cent of the Philippines education budget. Other key issues looking ahead include:

- the dilemma of whether to continue including only OSY age 15 and up;
- finding a balance between literacy and life skills within FELP programmes;

- better meeting learner needs by 'de-formalizing' NFE curriculum and delivery – this need for legitimacy and SP's use of many formal teachers (having pros and cons) decreased flexibility;
- balancing job-ready skills and academic competencies (subject to testing) under A&E – the former were downplayed, in part due to the need to build up programmes' legitimacy;
- failure to establish a working Benefit Monitoring and Evaluation System in the Project, in part due to two failed attempts to set up overly sophisticated management information systems that were poorly matched to needs and capacities, with inadequate training given; and
- initial design flaws, including overemphasized (and in some cases inconsistent) numerical input-based targets (i.e. Number of learners to be enrolled), insufficient FELP contact hours for functional literacy, and inadequate sustainable support systems (e.g. library resources and building-in of local government/NGO support).

4.3 Reaching rural educators

In either the formal or non-formal education sectors, a critical challenge is to ensure that educators have adequate skills and mastery of content and pedagogy. This poses a formidable challenge. In the ADB-assisted NFE projects noted above, one of the key tasks was to establish training systems to give NFE facilitators pedagogic skills appropriate to very diverse learners, as well as the ability to flexibly adapt content and delivery to meet learners' varying needs. Some progress has been made, and it is hoped that future NFE projects can build on lessons learned.

ADB has much more experience in supporting training for teachers and administrators in the formal school system. Much of this assistance has been directed to rural areas, where educators' initial preparation and periodic reinforcement are both critical to providing access to quality education. Strengthening staff upgrading systems is a key to attaining a range of goals, from universalizing primary and then lower secondary education (wherein the immediate objective may be expanding coverage of training to rural teachers and headteachers) to pursuit of the moving target of education quality. As demonstrated in the Lao PDR project described in *Box 3*, support must often try to address both these goals, and expanding system coverage and improving programme content both put a high premium on innovative approaches. More comprehensive approaches may also be needed, as under the ADB-supported *Capacity Building for Teacher Education Project* in Nepal, which tries to strengthen teacher education system management and performance via broad capacity building, as well as creating new curricula and training for teachers to better meet the needs of girls and other disadvantaged groups.

4.4 Broader education reform

(a) Decentralization. ADB and many other donors directly or indirectly support education decentralization, which generally involves devolution of both management and curricular autonomy as well as fiscal responsibilities. Benefits of such reform may include increased efficiency and local responsiveness. Nonetheless, experience indicates that decentralization is not without challenges, particularly with respect to equity. Namely, schools in wealthier areas have the human and physical resources (including ready private sector partners) needed to exploit new opportunities, while those in poorer areas face new administrative and budgetary burdens.

In addition to loan support, ADB has undertaken sector research as well as regional and country-specific TA to promote improved practice, including a TA attached to the *Secondary Education Development and Improvement Project*. More recently, China has requested ADB to provide a stand-alone TA in 2003 for compulsory education finance (see also *Box 1*).

(b) Funding and sustainability. A closely related issue is the overall level of funding provided to education. Like other donors, ADB typically advocates increased government prioritization of key public goods such as education and health. A loose target is that education should account for at least one-fourth of total public expenditures, with priority given to securing access to free primary and lower secondary education for all children. Of course, efficiency in expenditures is also a critical issue, and innovative approaches are often needed to balance efficiency and equity: ADB has had some success with increased community participation (see, for example, *Box 3*) in managing and augmenting school-level resources. However, the reality will always be that community resources (whether for school maintenance or for student materials and uniforms) are more constrained in poor rural areas.

At the project level, sustainability is clearly a key issue. In the Philippines, for example, lack of continuity following project completion has been problematic in both NFE (*Box 4*) and formal education projects. In numerous projects surveyed across ADB's Developing Member Countries (DMCs), a recent ADB (2001a) study notes the near universal lack of political will to devote resources to sustain project benefits, with government commitment in Malaysia as "the sole success story". Of course, 'sustainability' (however defined), is clearly a multi-faceted issue, and part of the responsibility for ensuring post-project maintenance of benefits falls on project design and on ADB.

(c) Curriculum and broader innovation. The statement above that education quality is 'a moving target' embodies two realities: first, delivery of existing curricula must approach best practice nationwide (generally meaning 'catch-up' by poor rural areas); second, curricula must respond to meet evolving social and economic demands. Both of these imply the need for the education system to adapt. Moreover, as stressed in the recent World Summit on Sustainable Development (WSSD) (see *Section 1, Introduction*), new linkages must often be sought across sectors.

Several of the examples cited above touch upon some aspects of broader change. In terms of multi-sectoral approaches, under the grant funding windows described in *Section 2*, ADB is currently processing proposals in China and the Mekong Region to utilize education to combat HIV/AIDS. The bi-directional relationship between HIV/AIDS and education – a very salient example of the need for new approaches combining efforts across various sectors/line ministries – will be covered in a presentation on Thailand during this Seminar, and hence is not covered here. However, two other areas emphasized at the World Summit on Sustainable Development (WSSD), nutrition-education linkages and ICT, are briefly discussed in *Box 5* and *Section 4.5*, respectively.

Box 5. Nutrition-education programmes and *Early Childhood Development* (ECD)

ADB has made some progress in pursuing multi-agency partnerships to comprehensively address the education and nutrition needs of infants, children, and adults. Examples to date include:

- Evidence in three ADB regional TAs has clarified the role of life-cycle nutrition in well-being, including the critical role of maternal and infant/child nutrition on child cognitive development.
- Joint ADB-UNICEF research led to advocacy for national fortification (versus supplementation).
- A proposed TA for China in Strengthening National Public Nutrition Planning will advocate policy and investments to support poor children, and will include a consumer education campaign.
- ADB is currently providing loan assistance to the Philippines for ECD.
- ADB co-operated with UNICEF in a project preparatory TA for ECD in Indonesia: no loan ensued.

Finally, ensuring quality and local relevance in rural schools may also require innovative monitoring/evaluation systems that go beyond inputs. For example, a TA for *Primary School Performance Monitoring* in Bangladesh created a sustainable model that also captures various teaching-learning processes and outputs, which are more sensitive to outcomes of the poor and appropriate to rural school contexts.

4.5 Information and Communication Technology (ICT): promise and pitfalls

Before concluding, it is useful to consider the trend towards increased use of ICT in education. While helping to illustrate many of the broad concepts discussed above, this topic is of importance in its own right, given that investing in ICT **for** education (or in some countries, simply 'ICT education') has become a major agenda for many countries in the region. In particular, amidst the atmosphere of 'tech euphoria', it is increasingly important to recognize key dilemmas.

As noted by UNDP (2000), advances in ICT provide developing countries with *"an unprecedented opportunity to meet vital development goals such as poverty reduction, basic health care, and education far more effectively than before"*. Nonetheless, even in more urban settings, opportunity does not equal realization: there is a critical shortage of evidence on efficacy in developing countries, and existing findings are mixed.[11] Moreover, it is far from a foregone conclusion that ICT will increase access to quality education for the poor and other disadvantaged groups; in fact, particularly if concentrated in elite urban institutions, costly investments in ICT may do precisely the opposite. While there are numerous examples across the globe of hardware-heavy, tech-first approaches failing to meet expectations, more disturbing perhaps is that these typically exacerbate existing gaps across rural-urban, poor-nonpoor, gender, and other socioeconomic divisions. As succinctly stated by Mr Gudmund Hernes, Director of IIEP, *"The PC generates more inequities than the 'board and chalk'"* (IIEP, 2000).

ADB's *Policy for Education*, like the *Beijing Declaration of nine large 'E-9'* countries in August 2001, ascribes a high priority to equity and innovation in the use of ICT to improve education access and quality. It should be stressed that **ICT need not mean 'cutting edge' technologies** (e.g. Internet, satellite telephony); advances in more 'mature' forms of ICT such as television and radio have dramatically increased their potential to contribute to education and information resource dissemination.

Advancing equity via ICT use in education puts a premium on (i) clear identification of priority education objectives (e.g. improving teaching and school management in poor remote areas, increasing relevance for minorities and rural communities to combat drop-out, etc.), (ii) assessment of existing human and financial resources, and (iii) creativity in exploring solutions.

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[11] In one of the few experimental studies, Angrist and Lavy (2001) find that computer aided instruction in poor to middle-class schools in Israel led to lower test scores in mathematics (statistically significant) and possibly also Hebrew language.

Some guiding principles are quite evident. First, an overwhelming amount of evidence from developing countries around the world (including from numerous "ICT failures") indicates the importance of adequate investment in 'soft components', continuous training/enrichment, content development, and monitoring/evaluation.[12] More generally, project design must start from careful assessment of priority needs for education, as well as existing physical and human resource constraints, long before talking technology. Finally, at least in the context of rural education, ICT must be viewed as only a tool rather than an outcome. Especially where many children go without textbooks and schools lack even the most basic conventional teaching materials, investments in ICT must be justified by their ability to open up new solutions, with ICT acting as one catalytic element integrated in a broader approach.[13] This has implications for setting goals. ICT's true promise arguably lies not in higher test scores, but in its potential to act as a springboard for educational innovation, which is most badly needed in disadvantaged areas. To accomplish this, ICT initiatives must also build higher-level support for new approaches.

Beyond these principles, however, lie difficult and context-specific decisions with critical, if often subtle, implications for equity. Equity goals may run against 'realities' such as costs, logistical constraints, or the political appeal of hi-tech. This creates several dilemmas for policy and project design, as evident in the case of Mongolia outlined below and in *Appendix* 2.

ICT-based support under the ADB-assisted Mongolia *Second Education Development Project* (SEDP), and under the *Japan International Co-operation Agency-funded Project Sakura*, promotes Government efforts to strengthen the Informatics curriculum. However, there is also some recognition by ADB and within the Government that the benefits of this approach may not reach more disadvantaged rural communities and the poor. Thus, ADB is preparing

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[12] As noted by de Moura Castro (2001), ICT applications must align with both teacher needs and the dictates of the curriculum, while *"almost all evaluations indicate that lack of preparation of teachers is the number one difficulty"*.

[13] Similarly, experiences of the *Inter-American Development Bank* (IADB) indicate that *"If technology is used and programmed as an add-on, something additional requiring extra time and effort from teachers, and is not integrated into the learning process itself, neither attitudes nor learning are likely to change"* (Verdisco and de Fanconi, 2001).

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a proposal for the new Japan Fund for ICT (JFICT) to fund a pilot on ICT for *Innovating Rural Education in Mongolia* (IREM). Grant funding is justified since the pilot aims to demonstrate an untried and more pro-poor (and thus 'riskier') approach, which also requires some momentum in order to build political will.

Like Mongolia, the Philippines, and many other DMCs, China has ambitious plans for ICT use in education: the phase-in of IT (*xinxi jishu jiaoyu*) in the curriculum has already begun in more advanced urban areas (Zhang, 2001). *Given the costs and equity issues involved, ADB will work with the Ministry of Education (MOE) through a new TA (Box 6).*

Box 6. Tapping ICT for basic education in rural areas of China's Western Region

Technical assistance for Improving Basic Education in Underdeveloped Areas through ICT will:

- draw key lessons from often fragmented past and on-going approaches;
- promote focused policy dialogue on equity-enhancing applications of cost-effective and replicable forms of ICT for education; and
- pilot related innovations.

Based on discussions with the MOE on priority education needs, the pilot will likely focus on teachers and headmasters in poor rural areas, using low-cost ICT to provide them with new opportunities for skill upgrading and access to teaching resources. For example, cost-effective delivery of quality content might use both China's unique satellite infrastructure and CD-ROMs. The TA will also try to build higher-level support for broad innovation toward pupil-centered, locally-relevant, and active learning.

China also has substantial experience in using ICT for rural development, ranging from efforts by UNESCO-INRULED to the China Agriculture Broadcasting and TV College, which boasts more than 800,000 graduates. The TA may also indicate areas for cross-sector collaboration with such partners.

5. Conclusion

This paper suggests that there are strong justifications for government and donor prioritization of support for rural basic education. It outlines several important and broad issues, including the need for and challenges of broad approaches to provide formal and non-formal education in rural areas, and offers a sketch of ADB's recent experience. *ADB will continue to explore new approaches and partnerships to improve the impact of its support for education on poverty reduction in Asia.*

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Appendix 1. Educating girls and women

The ADB *Education Policy* (2002) states that, "***Investing in women's education results in substantial gains and economic benefits***", leading to improved health (including, but not limited to maternal and infant mortality), reduced fertility rates, and increased schooling for subsequent generations via several mechanisms[14]:

- increased demand for family planning and promotion of contraceptive use;
- greater awareness of good nutrition and sanitation practices and their role in child health; and
- higher opportunity costs on women's time due to increased potential earnings in the workforce.

Disparities can be quite stark. For example, Birdsall (1993) notes that uneducated women in South Asia have seven children on average, compared to fewer than four children for educated women (defined as having at least seven years of schooling), while in Africa, the rate of mortality by age 5 for children born to uneducated mothers (roughly 20 per cent) is more than double that for children with educated mothers.

If, as found by Lam and Duryea (1998) and others, educated mothers ensure greater investment in child quality (i.e. schooling and health) rather than quantity, it is clear that educating girls has intergenerational effects. There are other far-reaching externalities. Schooling girls and providing access for women to non-formal education is critical to overcoming the vicious cycle of poverty (broadly defined) and gender discrimination. A broad array of evidence at both the micro-level (e.g. Moghadam, 1990; Binder, 1998) and macro-level (World Bank, 1991; United Nations, 1991) indicates that:

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[14] Research by Schultz (1990) notes assortative marriage (i.e. better marriage opportunities for more educated women) as another key mechanism, though this is a relative rather than society-wide effect.

- poorly-educated women face the strongest discrimination in developing societies, manifested in both intra-household allocation and in the workforce and society as a whole;
- the bias toward schooling boys is often strongest among disadvantaged children with limited resources available for children's education; and
- a strong correlation exists between education, labour force opportunities, and family patterns.

Likewise, a recent study of employment trends in China by Hu (1998) suggests that education may be a key for women's job security, particularly during periods of economic restructuring or downturns.

While one cannot automatically infer causality from correlation, such studies are consistent with widely-held beliefs about social processes in developing countries, and with limited evidence from pseudo-experimental studies.[15] ***In short, the empirical justification for investing in women's education is clear.***

Appendix 2. Avoiding pitfalls and realizing ICT's potential: the case of Mongolia

In Mongolia, discussions with a broad range of stakeholders on investing in ICT for education found several policy and project design dilemmas that are common to many Developing Member Countries (DMCs):

- Focus on areas where costs and infrastructure barriers are lowest and ability-to-pay highest (important for cost-recovery, sustainability, and private sector involvement), or on those with the greatest information needs and potential impact of ICT (perhaps only possible under grant-funded projects)?
- Prioritize direct access by pupils to computers (often principally in Informatics classes for upper grade students in more urban schools), or

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[15] Analysis using an instrumental variables technique by Spohr (2000) finds that women's education delays the timing of first birth, has broadly empowering effects, and promotes family savings for old age. The study also provides tentative evidence that mothers' education results in increased investment in children's schooling.

empower all teachers (especially in information-poor areas) with tools to create innovative and pupil-centered classrooms?
- 'Maximize impact' by concentrating large equipment packages in a few flagship schools, or broaden the initiative's reach via more limited (lower cost) approaches?
- Pursue 'quick wins' by providing relatively proven ICT tools to students/ communities with demonstrated capacity, or undertake riskier 'long-haul', 'multi-faceted', and 'unsustainable' approaches to assist the *hard-to-reach* (e.g. illiterates, minorities, remote areas, etc.)?[16]

The proposed ICT for *Innovating Rural Education in Mongolia* (IREM) *Project* dovetails with and seeks to sharpen the poverty impact and overall efficacy of ICT-related initiatives under the *Second Education Development Project* (SEDP). It aims to create a replicable model for promoting modernized teaching and school-level innovation, using ICT to enhance education quality and relevance by empowering teacher innovation towards a pupil-centered, active learning environment. The design is guided by the following principles:

- **Addressing needs of teachers, head teachers, and officials**, identified via consultations at various levels, focusing on ICT in the context of exploiting curricular flexibility to enhance local relevance.[17]
- **Cost effective/viable**, relying on minimal hardware additions (1-2 robust laptops per school, with solar power where necessary) and a basic email-based system (shared with the SEDP) capable of delivering text-only information flow over standard phone lines in batch transfers at "midnight hours".
- **Emphasis on soft components**: (i) training for teachers and head teachers in ICT use to improve teaching and school management; (ii) information resources and theme/subject-specific content (for skill upgrading and

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16. A review of various studies on telecentres by Capper (2002) notes the problem of inequitable access and benefits, but proposes some solutions, such as targeted subsidies. Similarly, experiences of "Grameen phones" in Bangladesh or India's internet "Hole in the wall" suggest scope for at least cautious optimism.
17. Successful school-level innovation depends critically on strong buy-in (from teachers up the administrative chain), with a commitment to integrate ICT tools into teaching and learning. See Verdisco and Velasquez (2001) for evidence from ADB.

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creative classroom applications) via email-based bulletin board systems (BBS) and CD-ROMs; (iii) email networks connecting teachers and head teachers across schools and to support by local/national education offices; and (iv) monitoring and impact evaluation, with in-field teams also able to troubleshoot.

- **Targeting poor students and community members** both in school selection and via sub-pilots on non-formal education (e.g. literacy), priority health needs of the poor, and access to poor dormitory boarders. These will give "more bang for the buck," while also enhancing school-community linkages.
- **Partnerships**, including collaboration/resource sharing with ICT initiatives by the *Japan International Co-operation Agency* (JICA) and under ADB's SEDP, as well as implementation by national and internationally-affiliated NGOs with a strong track record in ICT use at the grassroots level.
- **Capturing lessons** through baseline and follow-up surveys/studies, including schools covered under the IREM (where ICT provides a tool to teachers) and SEDP and JICA interventions, which focus on improving Informatics classes for children. Policy dialogue will culminate in a national forum on public-private partnerships.

Responding to the transformation of rural labour markets: implications for education and training

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Introduction

If governments want rural development to succeed, the problem of rural poverty must be given priority. A clear understanding of the causes of poverty, therefore, is necessary. A report from an ADB monograph, *Fighting Poverty,* (p. 2) describes the Asian situation as follows:

> *"After more than three decades of heady economic growth in Asia, few people would imagine that the region is still home to the 70 per cent of the world's poor; that 900 million hungry Asians are trying to get by on less than US$1 a day. Poverty is a tragic waste of human resources. South Asia alone already has more than half a billion poverty-stricken people, twice as many as in the whole of sub-Saharan Africa.... The small Pacific island nations may have relatively high per capita income, but they suffer because of their remoteness, vulnerability to national disasters and inability to cope with the impact of economic crisis outside their borders. Poverty is not a natural human condition. It has multidimensional causes such as wars, corrupt government, failed ideologies, and unjust laws and policies. The quality of life for many is still 'among the lowest in the world'. But it can be conquered through economic development".*

The above picture was described in the recently held *World Summit on Sustainable Development* (WSSD) held in Johannesburg, South Africa, 2-4 September 2002 to be the *"Asian Century of Poverty"*. Eradicating poverty is the greatest global challenge facing the world today and an indispensable requirement for sustainable development, particularly for developing countries (WSSD *Plan of Implementation*, p. 2). For without this eradication, any good intentioned social development will always be derailed.

A disturbed rural environment

In addition to the multi-dimensional character of poverty, the confluence of some disturbing elements is worth mentioning. This includes among others environmental degradation, increasing demographic dichotomy and the negative social effects of globalization.

The Asian and Pacific Region suffers from serious environmental degradation. The air and water in many parts of the region are among the most polluted in the world. Asia has lost a huge amount of farmland to erosion, half of its forest area to overlogging, and half of its fish stock because of pollution and overfishing. All this degradation makes the rural environment, in which the majority of the poor lives, unproductive (*Fighting Poverty*, p. 4).

Due to lost productivity, an increasing and continuous migration of the rural poor to urban-based economies is taking place, leaving the rural areas with a demographic dichotomy of the very old people at one end of the age spectrum, and the unskilled young people at the other end. This makes the rural labour force not only inefficient but, also, less productive.

The onset of the globalization phenomenon, notwithstanding its good effects, is also viewed as having prompted the marginalization and exclusion from mainstream development the landless, small and marginal tenant cultivators, and indigenous peoples in the rural areas (Deolalikar, *et al.* p. 26). In many parts of the region, the opening up of domestic markets to the agricultural products of other countries due to tariff reduction and the lifting of import-restriction as mandated by the *World Trade Organization* (WTO), has forced the peasants into a competition, which they cannot possibly win and will threaten the country's food security (Philippine Daily Inquirer, October 29, 2002).

Transformation of the rural labour market

The study of the *International Labour Organization* (ILO) in 1995, which was validated in the recently held World Summit at Johannesburg, reported that poverty profiles for developing countries tend to characterize the poor as rural agricultural households with little or no land. In an agrarian setting of highly unequal distribution of assets and access to resources for agricultural production, non-farm labour becomes an important source of income for the poor. In particular for both small farmers and the landless who make up the bulk of agricultural labourers, there is a clear dependence on the rural labour market for incomes.

The complexities of the relationship between rural labour markets and poverty form the central issue in this study. Some interrelated factors which affect rural labour market conditions were identified to include: 1) the macro-economic environment and agricultural productivity, 2) population characteristics, 3) rural-urban migration, 4) land holdings and tenure patterns, 5) rural off-farm employment possibilities, and 6) institutional characteristics of agricultural production (Allan de Janvry *et al.*, 1995).

In this same study, a summarized trend of the nature of rural labour for South Asia has been described as follows:

1) Unlike Africa and Latin America, South Asia has not undergone major structural adjustment and stabilization programmes in recent years. The past two decades can be characterized by slow, steady growth which has paralleled the growth in the agricultural sector. Agriculture remains the main engine of overall economic growth, with good years in agriculture translating into high rates of GDP growth, and bad years inducing GDP stagnation. While changes in agricultural productivity have led to a general decrease in poverty, the absolute numbers of poor remain high.
2) Rural to urban migration is happening but has not reached levels comparable to those of Africa and Latin America. South Asia remains largely agrarian. Slow urbanization and weak labour absorption in off-farm rural activities suggest that a large number of the poor still rely heavily on agriculture as a primary source of employment.
3) Increasing demographic pressure, state sponsored legislation, institutional biases towards large farmers, and technological changes have altered the agrarian production system. This has led to declining tenancy, more fragmentation, and concentration of operational land holdings through reverse tenancy which have aided the increase in the ratio of agricultural wage labourers to the agricultural work force.

4) Since the rural economically active population reliant on wage labour has steadily increased, trends in wages have become increasingly important for rural welfare. For example, real wages in India and Pakistan have increased as a consequence of agricultural growth in India and out migration in Pakistan. In Bangladesh and Sri Lanka, real wages have either been stagnant or have declined. These trends are mirrored in the worsening poverty in Sri Lanka, modest gains in Bangladesh, and encouraging improvements in Pakistan and India.

The scenario depicted in this ILO study has mirrored a slow pace of agricultural growth and weak labour absorption in an undifferentiated rural labour market. This means that a large number of the poor still rely heavily on agriculture as a primary source of employment. Efforts therefore must be made to increase the growth of agricultural productivity and farm incomes in order for growth of employment to occur in poverty stricken rural areas.

The need for a sustainable framework for rural development

To better appreciate the directions of education and training for rural development and poverty alleviation, a comprehensive framework for sustainable rural development needs to be designed and adopted in each developing country. Absence of such a framework makes educational strategies a shotgun approach to reducing poverty.

Experience of the past three decades has clearly shown that rural growth can reduce poverty, sustained growth increases the demand for labour, which in turn generates more economic opportunities, and raises worker productivity and wages. However, economic growth can only reduce poverty effectively, when linked to a comprehensive programme to promote social development (*Fighting Poverty*, p. 16).

For the purposes of this paper, it is proposed to adopt the framework for *Philippine Rural Development 1991*, as shown in the *Figure 1*, as a prototype model for discussion. The monograph (Sison and Valera, 1991, pp. 19-22) proposed in general that a strategy for rural development as shown in the Figure, should have as its primary objective, the improvement of the quality of life of the people in the rural areas. The success of government efforts to achieve this social development objective must be guided and evaluated by its ability to reduce the incidence and mitigate the severity of poverty in this sector through:

1) **Increasing employment**. As the labour force increases in size, opportunities must be available to those seeking employment not only in the rural sector but in the urban sector as well. This will require not only the improvement of human resources but also the mobilization of savings, from income generated by the rural sector, and investments in rural development projects.
2) **Increasing efficiency**. Increasing the efficiency of resource utilization, and consequently resource productivity, through improved technology is a prerequisite in dealing with poverty effectively. However, consideration of ecological harmony and the conservation of scarce resources must, likewise, be sustained in the long run so that the succeeding generations may be able to share in the benefits derived from rural development.
3) **Sustainability**. In order to sustain the gains from rural development plans and programmes, their design must stem from an understanding of the environmental, social, political and economic circumstances of the intended beneficiaries. Furthermore, implementation must be based on their relevance, suitability and adaptability to the existing conditions of specific areas, where development intervention strategies will be undertaken.
4) **Equity**. Rural development equity requires a broader access to resources, employment opportunities, government services and infrastructure.
5) **Empowerment**. Increased participation of the rural population in determining, implementing and directing plans/programmes to achieve rural development has been advocated by development analysts in recent years. This may be achieved by increasing the capacity of the rural population to help themselves through the establishment of their own organizations. This, in turn, will ensure that growth in the rural sector is self-sustaining and is able to meet the basic requirements of rural people, as perceived by them.

The process by which these objectives may be attained is very complex and dynamic. It will require general structural and behavioural changes in the rural sector. In order to facilitate these changes, several overlapping and complementing mechanisms need to be initiated and mobilized. These are:

a) rural industrialization;
b) efficient and effective support services and delivery systems;
c) human and institutional development; and
d) proper resource management.

Some of the important components of each of these mechanisms are indicated in *Figure 1*. Although this framework focuses on the upliftment of the poor, it does not mean that rural development is solely for them. On the contrary, rural development must benefit all.

Implications for education and training

One of the components identified in the framework is education and training under the human and institutional development mechanism. If the *majority of the poor lives in the rural areas, any attempt to reduce poverty should, therefore, focus on the rural areas where lack of access to essential assets and opportunities, such as participating in making decisions that shape their lives, prevail. Human capital is the primary asset of the poor and its development is of fundamental importance in alleviating poverty* (*Fighting Poverty*, p. 14). Therefore, it is the thesis of this paper that every person must have access to quality basic education, primary health care and other essential public services like clean drinking water, sanitation and shelter to ensure the success of poverty alleviation programmes.

In rural development efforts there are two questions that need to be answered (Sison and Valera, 1991). The first question is: "*Who is to be developed?*" and the other is, "*What aspects of rural life are to be developed?*" To be straightforward about it, the answer to the first question is the rural labourers and their families. This category includes: (1) landless rural workers; (2) upland farmers; (3) subsistence fishermen; (4) rural women and youth; (5) rural workers in mining, transport and market enterprises in agricultural, forestry and fishery areas (Ledesma, 1985).

On the second question, we say that there are many aspects to focus on depending upon the basic requirements of rural people as perceived by them, including the feeling of powerlessness.

Responding now to the needs of a transforming rural labour market as described earlier, the education and training plans and policies *must be geared towards specifically addressing the unique character of the rural sector that perpetuate poverty.*

The following may be worth considering:

1) Design a decentralized *Basic Community of Education* Curriculum to be administered by empowered Principals (School Administrators) from the elementary and secondary schools, and participated in by the *Parent/Teacher Associations* (PTAs). The basic feature of this programme is, specifically, to address the unique characteristics of the rural sector with the participation of the community people to determine the content of the curriculum. *The education could be free* and managed by empowered school administrators who are *provided budgetary allocations* and are in control of their budgets. The content of the curricular programme may focus on two general areas: (1) development of basic competencies for good citizenship, without neglecting the universal education requirements and to allow learners to move to the next educational ladder; (2) incorporation of the elements of entrepreneurship to allow learners after schooling to support themselves through their own work (gain employment).

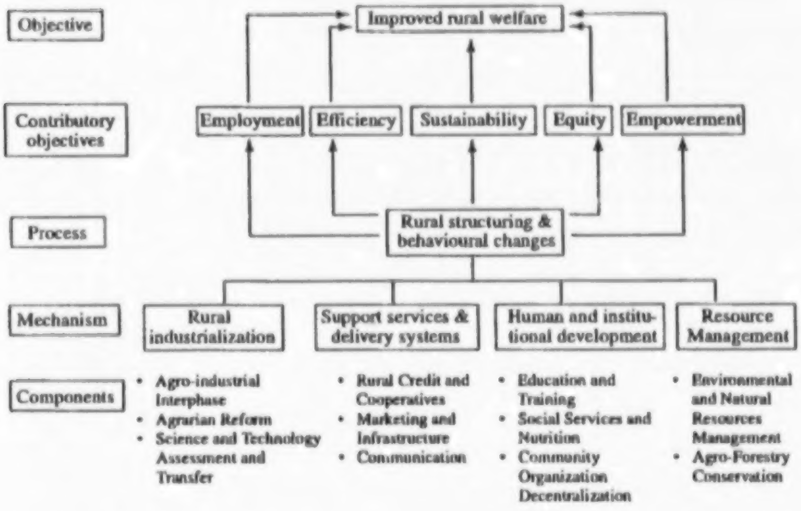
2) The need to redistribute/establish strategically the vocational and technical agricultural schools and community colleges within a commuting distance from the economic zones or trading centers, to backstop the requisite rural industrialization programme of the community. The concept of dual-technical training and entrepreneurial farm management could be a part of their curriculum.

3) For *Items 1 and 2* above, the provision of optimal facilities, scholarship for poor families in rural areas and health insurance coverage for the poor is an integral component of the educational development programme.

4) In order to address the training needs of the rural labourers and the out-of-school youth who are the by-product of an education system that failed (the drop-outs), a comprehensive system for determining the various types of occupations needed in the development of the community has to be adopted and be an integral part of the capability of the vocational technical schools. This type of information is necessary so that whenever training needs change, the concerned institutions can determine a new training need that will address changing or emerging jobs or occupations. (Mancebo *et al*., 2002).

5) The state through the school system (particularly the vocational/technical institutions) or any agency should be able to provide a scaffolding mechanism to initially support graduates in establishing themselves in their occupational careers or entrepreneurial business. On the larger scale, the state may consider the establishment of a so-called *Career Development Bank* (CDB) which will provide financial assistance/loans to enterprising vocational technical graduates i.e. in agriculture as well as promote or market placement of the new graduate. *This is a pro-poor innovation that would help make rural labour productive, have better income and, thereby, reduce poverty.*

Figure 1. A conceptual framework of a strategy for rural development (Adopted from the UPLB Rural Development Study Team, 1991)


Objective
Improved rural welfare
Contributory objectives
Employment
Efficiency
Sustainability
Equity
Empowerment
Process
Rural structuring & behavioural changes
Mechanism
Rural industrialization
Support services & delivery systems
Human and institutional development
Resource Management
Components
• Agro-industrial Interphase
• Agrarian Reform
• Science and Technology Assessment and Transfer
• Rural Credit and Cooperatives
• Marketing and Infrastructure
• Communication
• Education and Training
• Social Services and Nutrition
• Community Organization Decentralization
• Environmental and Natural Resources Management
• Agro-Forestry Conservation

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Landcare in the Philippines: developing capacities of 'Farmers of the Future' and their communities

by **Tom Vandenbosch**
Farmers of the Future

Abstract: This paper describes the role of natural resource management as a rural advantage and suggests ways to respond to new challenges in achieving sustainable agriculture in the rapidly changing social environment in the upland areas of South-East Asia. This is done through summary and analysis of experiences of the Landcare movement in the southern Philippines. Landcare is a farmer-based extension approach that involves farmer knowledge-sharing and partnerships with local government and technical facilitators. Special emphasis is given to labour-saving and more profitable soil conservation and agroforestry technologies, thereby responding to the needs and demands of evolving labour markets. In order to create an holistic approach to Landcare, which helps to develop capacities of the *Farmers of the Future* and involves the whole community, schools have also become involved.

Introduction: Natural resource management as rural advantage

To achieve growth, rural areas need productive activities which produce rural exports: goods and services that can be traded outside rural areas. Given that rural areas are in competition with urban areas, it is important to understand where rural competitive advantage lies, in a case by case manner (Porter, 1990). Availability of natural resources is one of the main categories of rural resources, which underlie the basis of rural advantage. The most important rural resources are likely to be agricultural products, but natural resource utilization (forestry, mining, fishing), allied agricultural activities (stall-fed livestock, bees, silk, aquaculture), natural resource processing and rural tourism and recreation are all growth sectors (Wiggins and Proctor, 1999). Rural disadvantage lies in the economic distance of the site of production from major markets, goods and services. The dispersed and small-scale nature of rural economic activity increases transaction costs and reduces competitiveness.

The Landcare approach in the Philippines

New challenges in the uplands

In the Philippines, 20 million people are farming in areas with slopes at gradients of over 18 per cent. Biophysical conditions in the uplands vary with soil types, fertility, climate, topography and vegetation within small areas and short distances. People in the uplands are experiencing dramatic changes in many areas of their survival as they explore development opportunities. Hence, both diversity and change characterize the upland areas. Many upland communities have to deal with insecure land tenure, limited technical skills, unavailability of alternative livelihood, poor access to market and capital and other forms of public services, as well as with an increasing population pressure. Natural population growth and migration from the lowlands has resulted in farmers cultivating extremely steep slopes and poorer soils, and leaving lands in shorter fallow periods, causing rapid soil erosion and land degradation. Pressure for increased food production for subsistence has pushed agriculture toward unfavourable sloping lands, but also to forest margins and forests. On the other hand, some prime agricultural lands have been converted to non-agricultural uses to give way to urbanization. Inappropriate farming practices in these fragile areas have contributed significantly to the degradation of the resource base such as severe soil erosion, loss of biodiversity and sedimentation of downstream areas (Catacutan and Mercado, 2001).

Technological innovations and institution building

Landcare is a movement of autonomous farmer-led organizations, supported by local governments with backstopping from technical service providers that share knowledge about sustainable and profitable agriculture on sloping lands while conserving natural resources. In the southern Philippines, Landcare has developed into a dynamic movement finding new land care solutions with now around 6,000 farmers involved in almost 300 groups from five municipalities in northern and eastern Mindanao. The major crops grown are corn (both for feed and for human consumption) and vegetables – especially cabbage, beans and potato. More than 50 per cent of corn production is destined for market, and vegetable crops such as cabbage, potato and beans are produced almost strictly for sale, with home consumption accounting for less than 10 per cent of production in each case (Coxhead *et al.*, 2001).

Farmers have established more than 1,500 conservation farms, and more than 400 community and household nurseries that produce hundreds of thousands of fruit tree seedlings and timber tree seedlings, all done entirely with local resources. Local governments provide support in terms of policy incentives and funding for training and projects. Farmers share their knowledge, skills, leadership and experiences, apart from the labour, time and low-cost materials they put together for group activities. On the other hand technical people provide knowledge, skills and facilitation for group training and development. Today, Landcare has become the melting pot for farmers and other community members to discuss issues, share lessons, invest talents, skills and other resources geared towards better land husbandry and protection of the environment from degradation. It threads a path for constructive, long-term and practical action at a community level for tackling environmental and sustainability issues. The Landcare experience in the Philippines suggests that such an approach may provide a more effective means to share and generate technical information, spread the adoption of new practices, enhance research and foster planning processes.

Seen in a broader context, *Landcare is an innovation*. It is about communities working together to tackle issues about natural resource degradation. It is also a social movement and a vehicle for local communities and individuals recognizing natural resource management needs and taking responsibility for developing and implementing sustainable natural resource management programmes.

Landcare groups exhibit some similar characteristics to the farmer field schools made popular in integrated pest management. Landcare groups, however, are more formalized and aim at a broader range of land degradation and sustainability issues. Some distinguishing features of Landcare groups are:

- They develop their own agenda and tackle the range of sustainability issues considered important to the groups.
- They tend to be based on neighbourhoods or small sub-watersheds.
- The impetus for training comes from the community, although explicit support from outside may be obtained.
- The momentum and ownership of the group's programme is with the community.

There are signs that institutions like this could help transform extension systems. Extension agents move from role of teacher of individual farmers one-on-one, to that of being a facilitator to whole farmer groups (Campbell, 1994). Conservation farming based on contour buffer strips is one practice that is being popularized through Landcare in the Philippines. Another practice is tree nurseries for growing new species of fruit and timber trees to diversify the farm enterprise. But since the agendas of the groups are determined by their own members, we observe a wide range of issues taken up by different groups, including dairy and beef farming, cut flower production and vegetable crop farming, among others (Garrity, 2000).

Addressing labour intensity

Continuous crop production on steep slopes in Mindanao induces annual rates of soil loss that often exceed 100-200 t/ha (Garrity *et al.*, 1993). The installation of contour buffer strips reduces these losses by 50-99 per cent and creates natural terraces that stabilize the landscape and facilitate further management intensification. These advantages have led to the wide promotion of contour hedgerow systems. These systems are based on double rows of leguminous trees that are pruned periodically to provide green manure for the associated annual crops. Although this system has been shown to increase yields and better sustain soil fertility, adoption has been poor. Installed tree hedgerows were usually abandoned because farmers found that it took too much labour to manage them (ICRAF, 1997).

An indigenous buffer-strip practice that had been evolved by a few farmers at another location in the Philippines had been previously observed. These *Natural Vegetative Strips* (NVS) are narrow strips of land along the contour that are intentionally left unplowed during land preparation. Natural grasses and other vegetation are allowed to grow on these strips. NVS are exceptionally effective in soil conservation with minimal maintenance (Garrity *et al.*, 1993). Nelson *et al.* (1998) modelled long-term trends in maize yields and found that they increased after the NVS were established. On fields with NVS, maize production increased by about 0.5 t/ha. This was further supported by the experience of many farmers who claimed that the buffer strips substantially increased their yields within a few years after installation. Widespread popularization of the practice occurred through farmer-to-farmer knowledge sharing in the Landcare movement (Garrity *et al.*, 2002). Compared with other soil and water conservation measures, NVS needs much less labour, taking only 3 to 5 person days per hectare to establish. Also, the practice does not require outside sources of planting materials, nor does it compete heavily with crops. It provides the foundation for farmers to evolve their farms into more complex agroforestry systems at their own pace. Because of these features, farmers are easily adopting NVS (CGIAR, 2002).

The percentage of plots with contours and hedgerows declined from 16 per cent in 1996 to barely 5 per cent in 1999. On the other hand, the proportion of plots with trees and fallow, or techniques with labour-saving conservation measures, increased significantly, from 25 per cent in 1996 to 68 per cent in 1999 (Rola and Coxhead, 2001). Labour-saving technologies allow farmers to take on off-farm activities like processing and marketing. Landcare practices thus enhance farm productivity and profitability while protecting the land and environment (Mercado *et al.*, 2000). Labour-saving technologies also allow more entry in non-farm work. Studies show that relatively more women move out of the rural areas to work as domestic helpers, sales ladies, waitresses and factory workers in urban areas, while relatively more men remain to work on the farms (Suminguit, 1998; Paunlagui and Suminguit, 2001).

More profitable choices for trees

Farmers' decisions on which species to plant are usually dictated by what planting materials are immediately available to them, as well as by often haphazard and unverified market information. Regulations on the harvesting of some species also limit farmer choices. Poor choices often lead to unprofitable investments, painfully discovered only 5 to 10 years later.

The *World Agroforestry Centre* (ICRAF) and its partners are currently developing an approach that will help farmers and development practitioners diversify farmers' options and that will enable better tree investment decisions. This process will help drive decisions that are based on site-species suitability and markets. Included in the farmers' options would be both exotic and indigenous tree species (Koffa and Garrity, 2001).

Landcare in Schools

Basic education and productivity

Research shows that basic education affects small landholders and subsistence farmers' productivity immediately and positively, and that a farmer with four years of elementary education is, on average, 8.7 per cent more productive than a farmer with no education. Moreover, farmers with more education get much higher gains in income from the use of new technologies and adjust more rapidly to technological changes (Carnoy, 1992). Many children will be the farmers of tomorrow, hence, when well educated, they have more chance of becoming more productive farmers.

Contextualization of teaching and learning

In many countries around the world, irrelevance of school curricula to the life experience of pupils in rural areas seems to be an enduring problem. Many attempts have been made to adjust the content of the curriculum so that it becomes relevant to local conditions. In practice, this has often meant the introduction of some 'localized' topics and activities, for example, agriculture and other skill-based subject areas.

Relatively little emphasis has been placed, however, on the development of appropriate strategies for curriculum development and teaching and learning that are based on the immediate context in which the school is located.

The learning environment of an individual is a complex, multi-faceted system, which could be analyzed in many different ways. A study by Taylor and Mulhall (2001) aimed to explore three key learning environments for school-going children: the school, the home and the wider community. These three learning environments are often rather weakly linked and the experiences gained in each, although individually of great value, are seldom drawn together and integrated in the learning process.

The existence of weak linkages between the three learning environments infers that the experiences gained by pupils in school are often perceived to be divorced from life outside school, not only by pupils but also by parents and teachers. By strengthening these linkages and maximizing the interfaces between learning environments, then learning should become more effective.

Contextualization of learning occurs when the content of the curriculum, and the methods and materials associated with it, are related directly to the experience and environment of the learner. In rural primary schools, most learners have direct, first hand experience of agriculture, either as a result of their own activities, contributing to the family livelihood, or from observation in their immediate surroundings (Taylor and Mulhall, 1997). An agricultural topic used as a medium for contextualizing part of the curriculum can provide an avenue through which children can have repeated experiences, which help them to master cognitive, physical, and social skills. Agriculture can be the basis of integrated projects incorporated in the school curriculum, with academic activities chosen for their locally relevant, experimental attributes.

Contextual learning can serve as a method of combining natural sciences, mathematics, and technology with social and behavioural sciences into a coherent whole (Balschweid and Thompson, 2000). It is difficult to discuss living organisms, plants, and animals, devoid of any conversation involving science.

Contextualization draws on a constructivist perspective, in which a learner constructs his or her own knowledge as a result of experience which stems from living and interacting with animate and inanimate objects in the environment (Duit, 1991). The challenge for basic education is to find ways of relating those areas of teaching required, and laid down in centrally-planned

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curricula to the pupil's own personal experience of life, and thus to integrate the entire learning experience by linking learning environments (Taylor and Mulhall, 2001).

Agroforestry and natural resource management offer unique opportunities for contextualizing teaching and learning, because the concepts can be experienced at school, at home and in the wider community. Thanks to the multidisciplinarity of agroforestry and natural resource management, scientific, social, economic, political and cultural aspects can be included into different subjects and help the integration of disciplines. This can lead to a more effective application of what has been learned.

The *Landcare in Schools* programme in the Philippines is one example of using agricultural experience in a way that is innovative, learner-oriented, and strongly linked to the realities of pupils, parents and communities.

The Landcare in Schools approach

Landcare in Schools is promoting soil and water conservation and agroforestry technologies targeting children and youth. Pupils and students are taught the value of caring for the land and managing natural resources. Many of these schoolchildren are the future caretakers and managers of natural resources.

Landcare in Schools is a triadic partnership between teachers, local government units and the pupils/students. It complements the activities of their parents on conservation farming. Elementary pupils and high school students are not only being educated on the benefits of the technologies, but are also encouraged to relate what is being taught at school to their home and community context and experiences. As described above, this contextualization of teaching and learning enhances the quality and relevance of education. *Landcare in Schools* has become a practical learning guide for pupils and students to apply what they have learned in the classroom in actual field activities while sharing it with their families and communities.

Landcare in Schools follows two streams of implementation (Catacutan and Colonia, 2000):

1. through integration of agroforestry into existing subjects in the primary and high school curricula; and
2. as a co-curricular programme for pupils or students in form of a non-academic club.

Teacher training activities and information and education campaigns are being organized. These include slide showing about the ongoing natural resource degradation, demonstrations on solutions through conservation farming and agroforestry, and training on the roles of pupils, students and teachers in the promotion and adoption of appropriate natural resource management. Training does not only include technical competencies, but also facilitation skills so that teachers are better prepared to address needs in their particular situation.

Landcare in Schools activities are strongly supported by the *Parent/Teacher Associations* (PTAs) and local government units in the villages where the schools are located. The response of the schools is tremendous, such as with the formation of Landcare groups, associations or clubs among students, the establishment of school nurseries for timber and fruit tree seedlings, and the demonstration of conservation farming and agroforestry technologies. School nurseries are being used as learning laboratories. In the *Trees for Tuition* campaign, parents are encouraged to plant trees on their farms as an investment to be able to pay for the education of their children.

Farmers of the Future

Based on the *Landcare in Schools* experiences described above and other experiences from around the world, the *World Agroforestry Centre* has recently launched a global *Farmers of the Future* initiative, aimed at facilitating the integration of natural resource management into basic education, contributing to the improvement of rural livelihoods, land use management and environmental conservation, while bringing direct benefits to all learners and their families and communities. Providing children with a wide array of knowledge and skills related to land, soil and water management, as well as a more positive attitude towards sustainable agriculture and rural life, will prepare them better for new challenges in farming and related enterprises. The *Farmers of the Future* initiative intends to achieve these goals by:

- improving agricultural and natural resource management knowledge, skills and attitudes of youth;
- enhancing effectiveness of formal and non-formal education through active, experiential and contextualized learning;
- promoting the integration of sustainable natural resource management into basic education;
- linking with and making good use of existing national and global policy frameworks such as *Education for All* (EFA) and *Food for All* (FFA);
- strengthening linkages between schools, homes and communities, particularly in rural areas;
- encouraging local and regional collaboration and networking through flexible participatory multi-stakeholder approaches.

Discussion and conclusion

Experiences with the Landcare movement in the Philippines show that, on the one hand, in the presence of non-farm employment opportunities, labour-using soil conservation measures will have lower chances of adoption. On the other hand, labour-saving soil technologies will be adopted more.

Agricultural research and extension, as well as training and education, should focus more on crops and technologies that small farmers can profit from. One example is fruit and timber trees, which are being promoted through Landcare. Attention should also be given to business and market strategies and institutions.

Traditional agricultural technology criteria should be altered in the light of the great importance to farm households of diversifying incomes off-farm. The profitability of new crop and livestock technologies should be compared to off-farm uses of the cash and labour of the family.

Children and youth should be involved in the innovative processes described above. They are the farmers and natural resource managers of the future and provide a direct link with local communities. They will benefit from new approaches that bring them life skills while making teaching and learning more effective and relevant. The Landcare approach in the Philippines shows that *combined education and development programmes benefit enormously from the strengthening of school-community linkages.*

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Food for education and rural development

by **Anette Haller**
World Food Programme (WFP)

Food for Education: WFP's role in rural development

Most national governments recognize the importance of education for rural development. The benefits of education on economic growth and its contribution to increased productivity have been demonstrated. As the educational level of a population increases, the chances of living a healthy, productive life rise. It has also been understood by the development community, for more than 20 years, that education of girls to just the primary school level has significant, positive and long-term outcomes. Each added year of schooling for a mother results in a 5 to 10 per cent decrease in mortality among her children; educated women reduce their family size. UN studies show that illiterate girls marry as early as 11 years of age and may have up to seven children. In contrast, girls who go to school marry later, practice birth spacing and have an average of 2.9 children. Promoting basic education, especially for women and girls, is thus among the most effective investments that governments and donors can make to improve the physical, social and economic conditions of the poor. In developing countries the returns on investments in education are higher than in more advanced countries; the greatest returns are for primary schools.

Table 1. FFE beneficiaires of WEP in Asia 2001

North Korea	2,600,000	2,600,000	5,200,000
India	775,000	840,000	1,615,000
Nepal	93,000	115,000	208,000
Cambodia	130,500	159,500	290,000
Myanmar (take home)	50,000		50,000
Bhutan	12,700	18,300	31,000
China (take home)	2,000		2,000
Laos	15,000	20,000	35,000
Bangladesh	440,000	460,000	900,000
Pakistan (take home)	58,000		58,000
Afghanistan	12,000	16,000	28,000
TOTAL			~ 8.4 million

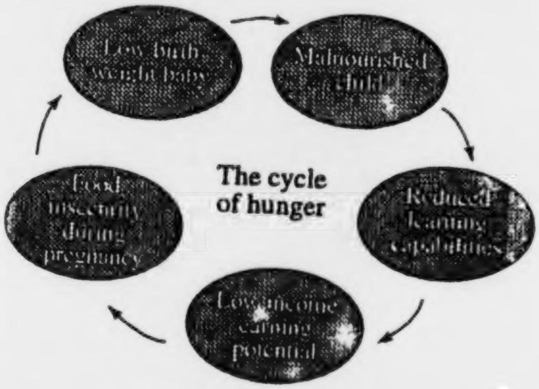
Yet, in poor countries around the world, and especially in rural areas, children are prevented from attending school. Instead they must take care of the family vegetable plot, care for younger siblings or fetch firewood and water. *Education for All* (EFA), particularly for all girls, remains very much a goal rather than a reality. Some 300 million children are chronically hungry in the world and 130 million of them do not go to school. Two out of three are girls. Roughly 150 million children of primary school age begin school but drop out before completing four years of education. This means that they have not acquired even basic literacy and numeracy skills. Without an adequate education, most children will never break out of the cycle of hunger and poverty. Those poor children lucky enough to attend school are often not much better off. On empty stomachs, kids become easily distracted and struggle to concentrate on their lessons. They may be at school but they are not in a fit state to learn.

For 40 years, WFP has addressed these problems by providing food to schoolchildren in poor countries worldwide. Initially, schools were seen as points of convenience to distribute surplus food, but over time food assistance evolved into activities carefully designed to have a maximum impact on education and human development. Working with national governments, local authorities and NGOs, WFP uses food aid as a direct input to attract children to school in rural areas where enrolment ratios are the lowest. It is in these poor schools that WFP provides hot food, nutritional snacks or take-home food rations to students. In 2001, WFP fed over 15 million children in schools in 58 countries. More than half of the beneficiaries are in Asia (see *Table 1*).

Another type of *Food for Education* (FFE) activity that becomes increasingly important for WFP is *Food for Training* (FFT). FFT activities are suitable to all types of situations, from development to humanitarian assistance, and even situations of displacement and migration. A food ration is provided to trainees as an incentive and to offset the opportunity costs of participation. FFT is particularly appropriate for women and adolescent girls: it is physically less demanding, it offers more flexibility in terms of scheduling and location, and it can address practical and strategic gender needs. Income-generating skills or nutrition and health education training relate to the traditional roles of women in society and are focused on women and girls' practical needs. Life skills training – comprising functional literacy and numeracy, leadership skills and awareness raising about social, political and legal institutions – serves a more strategic purpose as it supports women's empowerment. Training can fill gender gaps – in knowledge, decision-making and benefits – caused by the disadvantages women experience in society. Both types of training are most effective when combined: awareness raising can improve the social and economic position of women only if they are given the skills and the opportunities to generate income.

Links between education, malnutrition and food security

Figure 1. The hunger cycle


Low birth weight baby
Malnourished child
Reduced learning capabilities
Low income earning potential
Food insecurity during pregnancy
The cycle of hunger

Source: ODB, 2002.

Education and food security influence each other, they are closely interrelated. Education – especially education for girls – is a key to meeting the basic needs of millions of people throughout the developing world. Education is crucial in helping people to achieve sustainable food security and to reduce malnutrition. Without an adequate education, the next generation will never be able to break out of the cycle of hunger and poverty. On the other hand, food insecurity is too often an obstacle that restrains people from going to school and from receiving even the minimum basic education. Poor people can sometimes not afford to send their children to school. And they may have malnourished children whose learning capacities are diminished due to inadequate diets, since early childhood. The effects of malnutrition during childhood and adolescence are particularly devastating for girls. Girls who are malnourished during childhood are more likely to be malnourished as adolescents, to enter their first pregnancy malnourished, and to give birth to underweight babies, thus perpetuating the cycle of hunger across generations (see *Figure 1*). This effect is aggravated if the first pregnancy takes place during adolescence.

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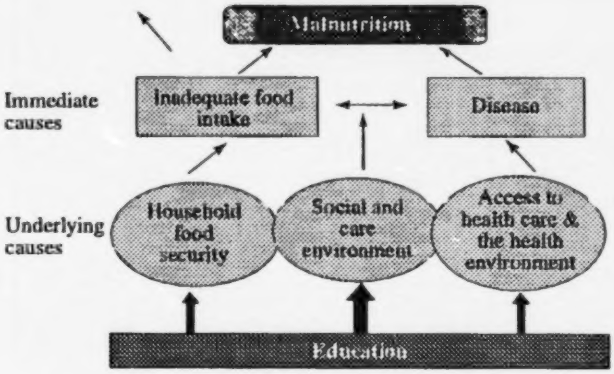
Addressing the three underlying causes of malnutrition can break this cycle: *food, care and health.* Household food security, women's knowledge of nutrition and related health practices and the childcare they provide are crucial for overcoming child malnutrition. And research has shown that female education is essential in doing this. When females obtain more education, knowledge and awareness, there are positive effects on household food security, childcare as well as on utilization of health and education services. Investing in women's education in turn increases the share that households spend on education and health. More educated and mature mothers are much better equipped to rear their children and to improve their access to food (see *Figure* 2). A study by the *International Food Policy Research Institute* (IFPRI) concluded that women's education and their resulting higher status "have contributed to almost half of the 1970-95 reduction in the prevalence of malnutrition in developing countries" .

Figure 2. The education – malnutrition nexus



Source: Model adapted from UNICEF.

There also is increasing evidence that targeting adolescent girls for education and out-of-school life skills training (in functional literacy, numeracy and legal and social awareness), combined with food aid interventions that remedy micronutrient deficiencies, could result in significant short- and long-term food security benefits. With the onset of menarche, adolescent girls become highly susceptible to anaemia and other micronutrient deficiencies, which impair their growth and, later, negatively affect them and their babies. Also, adolescents from poor families tend to drop out of school early and marry young. Access of adolescent girls to schooling beyond primary school education and to training programmes would contribute effectively to breaking the intergenerational cycle of malnutrition and poverty.

Food insecurity: an obstacle to school enrolment

In NEPAL the adult literacy rate of 39.2 per cent is one of the lowest in Asia and the 11th lowest in the world. There are pronounced regional and gender disparities in school enrolment rates: the primary school net enrolment rate is roughly 80 per cent for boys but only 61 per cent for girls. Through the provision of food aid (midday meal and vegetable oil for girl students in selected districts) to primary schools, the *Food for Education* activity has been addressing the critical education challenges in the country.

Over four years of implementation, significant achievement in the following areas were noted:

- *improvement in students' attendance;*
- *enhancement of attention span and learning capacity of students by relieving short-term hunger;*
- *heightened gender awareness; and*
- *reduced rates of intestinal parasitic infection in school children through the provision of deworming tablets.*

Some 216,000 beneficiaries received 4,990 metric tons of food aid in 2001.

Education influences positively food security. Yet, on the other hand, food insecurity often acts as an obstacle to schooling. One reason why children are not in school, in some parts of the world, stems from tradition or culture. In cultures where only men traditionally work in paid professional positions, school may be deemed 'wasted' on girls because it is not perceived to lead to paid work. There may be concerns about girls walking a long way to school and/or being away from the protection of their homes and families. Likewise there may be concerns about the lack of sanitary facilities and privacy for girls in schools or about jeopardizing the girls' morality with only male teachers being around.

Another important reason is food insecurity. In food insecure and impoverished populations, poverty often prevents children from attending school, even if it is provided 'free' without school fees. Not only are there often other costs associated with school (e.g. clothing, books), but there is also the loss of the child's labour. Poverty strikes girls particularly hard, as their work is so valuable to the family's subsistence. Marginalized, food-insecure people typically spend 65-70 per cent of their income on food. Poor, food-insecure families need the girls' labour and income. Girls contribute to the family by providing agricultural labour in the fields, selling goods in the marketplace, finding food and water, preparing and serving food, caring for other children, and/or by working as domestic labourers outside the family.

Short-term hunger impedes learning

While hunger bars children from going to school, it also impedes learning when they are in school. Three hundred million of the world's children are chronically hungry: the approximately 170 million of these children who attend school must learn while fighting hunger. Children in rural areas often walk long distances to school on empty stomachs. Many cannot afford to bring food from home to eat during the day. These children are easily distracted in the classroom and have problems staying alert and concentrating on the lessons. Teachers report that breakfast-deprived children fall asleep in class and are unable to benefit from the education provided. This syndrome, generally referred to as 'short-term hunger', has been shown to affect children's cognitive functions and, most likely, their learning achievements. Several studies have demonstrated that the effects of short-term hunger are exacerbated in children who already have a history of undernutrition and face nutritional deficiencies (Levinger, 1994). In addition, children whose cognitive development during the first years of their life has been impaired by malnutrition and who live on one meal per day are more affected by missing breakfast than are better-nourished children.

Food for Education (FEE) works

FFE programmes help get poor children into school, help them stay in school and help them learn while they are there. Providing nutritious food to children at school can help solve hunger and improve learning. When children are no longer hungry, they can concentrate on their lessons. With enough food to learn and thrive, they are more likely to stay in school longer. When food is available at school, attendance rates increase significantly. Parents are more inclined to send their children because they know their children will get a mid-morning snack at school, and it will add savings to the family budget.

Other benefits of school feeding programmes include improvement of hygienic standards by promoting hand-washing, and appropriate use of latrines/toilets; enhancement of health through de-worming and other health treatments – in partnerships with other UN agencies and NGOs. De-worming is particularly important. It is necessary to free children of intestinal parasites, which inhibit the absorption of nutrients into the body and cause anaemia. Moreover, children are early exposed to concepts of healthy food production and consumption – through participation in school gardens and education on nutrition.

In emergencies or protracted relief operations, school feeding (even in 'makeshift' schools) is extremely important in several ways. First, the feeding is a critical source of nutrition for children. Second, the school provides a healthier emotional environment for children whose normal lives have been disrupted; and allows schooling to continue during a period when precious school time would otherwise be lost, handicapping the child in the future. There is no doubt that getting food to the undernourished is a necessary first step towards better nutrition. In emergencies, the direct link between feeding and nutrition can be demonstrated more easily. This is hardly possible in development situations, as it is difficult to isolate the impact of school feeding from other factors that determine the nutritional status of school children, such as parasites (especially intestinal worms), environmental conditions, and diseases.

Food alone is not enough to make food for education activities effective. Strengthening existing partnerships and forming new ones are necessary to contribute to the goals of *Education for All* (EFA). WFP has established school feeding partnerships with UNESCO, WHO, UNICEF, FAO, the World Bank and a large number of NGOs, among others, to maximize the positive effect of school feeding.

WFP's focus on girls, female adolescents and women

*WFP targets primary schools in rural areas in **PAKISTAN** in two of the provinces where girls' education is particularly underdeveloped, Balochistan and the North West Frontier Province (NWFP). Economic factors are a key impediment to education, in addition to cultural traditions. The provinces also suffer from an in-sufficient number of schools and the poor quality of existing ones. Low-income families are much less likely to educate their daughters than their sons since they rely heavily on girls' labour at home. In Balochistan's lowest income groups, the ratio of enrolment is six boys for every girl.*
WFP began to address the gender gap in these provinces in 1994 by distributing a 5-litre tin of vegetable oil per month to the family of each female student who attended school for a minimum of 20 days. Oil is a precious commodity for local families and an important part of the local diet. The WFP ration has a local value of about US$ 5; the monthly income of most families participating in the project is approximately US$ 30. At assisted schools in NWFP between 1994 and 1998, the enrolment of girls increased by 247 per cent. In Balochistan, the increase was 197 per cent. Student attendance and drop-out rates were also positively affected. WFP assistance helped change parental attitudes about female education.

> *Only a few years earlier, there was hardly a girl in school in the same area. Progressively, it has become more acceptable for families to educate their daughters. Even the most conservative families began sending their daughters to school as they realized the benefits of an education.*
>
> *The take-home ration programme has also had a noteworthy spin-off effect on women. Mothers now occasionally visit the schools to collect rations on distribution day or discuss school matters with teachers.*

Since the *Fourth World Conference on Women* in 1995, WFP has placed the needs and interests of women and girls at the heart of its activities. For poor households in the economically developing world, food security can be achieved only if all household members, male and female, contribute fully. It is usually women who bear most of the responsibilities for domestic work and family care and, in addition, take part in income-generating activities to ensure survival and food security, even in crisis situations.

In many countries – however – women's access to productive assets (education, land, credit, etc.) and related services, employment, health services and knowledge of appropriate nutrition and caring practices is severely restricted. WFP's *Commitments to Women*, made at the Beijing Conference, include a provision for WFP to target 50 per cent of its education resources, within a country, to girls.

The provision of meals has generally been very effective for increasing girls' school enrolment and attendance. However, in some areas, school feeding alone has not closed the gender gap in school attendance. Realizing that traditional school feeding was often insufficient to reach the poorest out-of-school children and to close the gender gaps in education, WFP developed an innovative way of using food aid. Basic food items, like a sack of rice or several litres of vegetable oil, are distributed to families in exchange for the schooling of their daughters. These 'take-home rations' compensate parents for the loss of their daughters' labour and enable girls to attend school. WFP assistance directly tackles the critical issue of the opportunity costs that prevent girls from receiving an education. The results are impressive with enrolment and attendance rates rising steeply, even doubling in certain places. Currently, such programmes are operational in 16 countries in almost all parts of the developing world.

Food aid provided in the form of mid-morning or as take-home rations can play an important role in attracting students, especially girls, to school, improving their attendance and enhancing their capacity to learn. Recognizing the importance of adolescence for girls and the fact that gender gaps are greatest after primary school, WFP focuses increasingly on girls' secondary education. It has also become clear that in order to attract and retain girl students, special conditions are required, such as female teachers, separate toilet facilities and a safe way to and from school.

Education for HIV/AIDS orphans

As is now widely recognized, the HIV/AIDS pandemic is having a devastating impact on developing countries. Of the myriad affects the disease has had on poor societies, one of the most tragic has been on children. It is estimated that 13 million children worldwide have become orphans because their parents have succumbed to AIDS. In many cases, these children are left to fend for themselves. Similar to war orphans, they must often earn money for the family and care for younger siblings. Sometimes they are taken in by relatives, neighbours, or foster homes. Many of these are poor households themselves. Surviving in the most desperate situations, they are exploited and left to scrounge for food. For these children, schooling is rarely an option. Building on the success of its take-home rations and school feeding projects for girls, WFP is implementing a similar strategy for orphans of HIV/AIDS. In these projects, WFP provides food to street children and orphans while they receive vocational training that will help them get jobs. WFP also implements projects in which the agency provides take-home rations at school to encourage the poor families caring for orphans to continue to do so.

Community involvement

An important objective of WFP school feeding is to serve as a catalyst for communities to take concrete steps to improve the lives of their citizens. WFP creates partnerships at the schools themselves, with parents, teachers and local officials. The agency enlists their time, materials and when possible, also their money. Parents' associations have proven to be a key to community participation. As a general rule, the essential services required for school feeding – cooks, kitchen helpers, guards – should be covered by the community, either by providing such services itself or by contributing cash to pay for the services. Parents' associations can have various tasks including hiring cooks, managing the canteen's food stocks, providing fresh vegetables or other ingredients to the canteens or transporting food to the school. Parents also take responsibility for repairs to classrooms and the building of new facilities. Often, WFP organizes groups of local women to manage the canteens and food service. Parent/women's groups also provide an ideal forum to discuss school health issues and to promote better hygienic and sanitary conditions not only in the schools but in the entire community.

The food basket

PR CHINA is classified as a low-income, food-deficit country. Despite impressive economic progress and near food self-sufficiency, an estimated 34 million rural people (out of a total population of 1.2 billion) continue to live below the Government-set poverty line of Yuan 635 per person per year (US$ 0.66 per day).

Rural women and children residing in China's remote western regions are the most vulnerable and disadvantaged in gaining access to resources. Illiteracy, semi-illiteracy and the lack of skills prevent many poor farmers, particularly women, from diversifying their sources of income and moving beyond subsistence farming. WFP's current Country Programme (CP 2001-2005) focuses on building physical and human assets and promoting self-reliance among the poor through interventions such as Food for Work, Food for Education and Food for Training. In conformity with the Government's Western Drive Initiative, the interventions are targeted at the poorest regions of the country, namely remote, mountainous areas of western China where minority populations *live. The objectives of WFP's Food for Training activities are to increase literacy, improve technical skills and management capabilities and raise awareness of basic health and nutrition.*

There are three different types of FFT activities, targeting women primarily. First, a functional literacy course over a 60-day training period followed by a refresher course approximately one year later. The second type of training primarily addresses the technical and managerial skills of candidates for IFAD-supported loans for income-generating activities. This training takes ten days. Women benefit from at least 50 per cent of IFAD micro-credit for income-generating activities. Skills training commences once IFAD loan disbursement mechanisms are in place. The third type of FFT consists of basic health and nutrition courses that address micronutrient disorders, reproductive tract infections among women and improve women's knowledge of balanced dietary practices for themselves and their infants.

The composition and size of the rations in individual projects are determined by the availability of government and WFP commodities and resources and local food habits, bearing in mind the nutritional requirements of school children. WFP supports school feeding with some combination of the following commodities: cereals, pulses, canned fish or meat, vegetable oil, sugar and iodized salt-fortified blended foods such as corn-soy blend (CSB) fortified biscuits.

The commodities can be delivered to beneficiary schools as they are received, to be prepared at the school. Or, they may be locally processed before their delivery (e.g. into the form of bread or biscuits). The number of meals/snacks and the timing of the food distribution is determined on the basis of the number of school sessions, the problems identified (lack of breakfast, afternoon absenteeism) and objectives fixed for the project. To the extent possible, school meals will be timed so as to minimize the possibility that they substitute meals provided at home. In half-day schools a snack before classes begin is often appropriate when children have to walk long distances from home and are likely to have skipped breakfast. A snack and a lunch are recommended for day schools, and three meals for boarding schools.

In view of the multiplicity of factors causing malnutrition and the relatively small nutritional input relative to total daily requirements of a school meal, school feeding cannot be expected to yield significant changes in nutritional status. However, there is evidence that with careful planning of both composition and complementary health/nutrition activities, school feeding may indeed play a role in counterbalancing to some extent deficiencies in regular diets, particularly with respect to micronutrients.

*If a child in **BHUTAN** wants to go to school, it is likely that he or she will have to walk for many hours just to get there. Because the country is so mountainous and so sparsely populated, it is not uncommon for schoolchildren to walk three hours each way. By the time they are in the classroom, they are hungry and cold and stripped of their ability to learn. For WFP, the key to Bhutan's future lies in the education of its children.*

Bhutan, with a population of 658,000 people, is classified as a least-developed, low-income, food-deficit country. Landlocked in the eastern Himalayas, Bhutan imports about 35 per cent of its cereal requirements. Pockets of chronic and seasonal food insecurity are found everywhere in the country.

WFP began working in Bhutan in 1974. The school feeding project assists the Royal Government of Bhutan in the expansion of primary education (Gross primary school enrolment is currently 72 per cent). Boarding facilities are an important feature of the education system in Bhutan; they are crucial to making education available for children, especially girls, in remote areas. Food aid is targeted to hostels at primary and community schools where parents carry most

of the boarding costs. Boarding students receive three meals per day at the hostels, of which two are provided by WFP.
In 2001, WFP provided approximately 4,800 metric tons of blended food, cereals, pulses and oil to an estimated 39,640 school children, who represented 38 per cent of the total number of school-age children enrolled during the current year in Bhutan.

Vulnerability Analysis and Mapping (VAM)

As a general rule, targeting within education projects is conducted at the level of geographic areas, with no selection of individual pupils within schools. Targeting is based upon analysis of the country situation and the problems food aid is addressing. For FFE activities, indicators such as school enrolment, drop-out rates, retention rates and literacy rates are mostly used – in addition to information related to household income/expenditure – for identifying the neediest areas. But also dietary pattern, malnutrition rates and micronutrient deficiencies may be considered in case the objective of the *Food for Education Activity* (FEA) is to improve the diets of the beneficiaries. Normally, all rural schools in the selected areas are potentially eligible for WFP assistance.

The analysis is done with the help of *Vulnerability Analysis and Mapping* (VAM). WFP has developed VAM as an information tool for the design and management of WFP activities. It is being applied to identify food-insecure areas and people, and to suggest strategies for addressing the dimensions of food insecurity at the household and individual levels. Behind the VAM acronym lie WFP's skills to plot food insecurity and vulnerability: which populations are most likely to face conditions of hunger and poverty, where people are not able to cope with shocks, where and why those conditions exist and where food aid should be best targeted.

VAM uses a variety of information sources and analytical methods, from satellite imagery of rainfall and crop conditions, to the monitoring of food prices in local markets, to simple face-to-face discussions with members of impoverished and food insecure communities. VAM analyzes the relationships within a multidimensional problem (e.g. food availability, access and utilization), taking into account elements of vulnerability including seasonality and intra-household food distribution. Food insecurity is a cause as well as effect of poverty, illiteracy, malnutrition and environmental degradation. Thus, achieving food security requires that:

- the aggregate availability of physical supplies of food from various sources (domestic production, commercial and food aid imports and national stocks) is sufficient – food availability;
- household livelihoods provide adequate access to those food supplies through home production, market purchases or transfer from other sources – food access; and
- utilization of those food supplies is appropriate to meet the specific dietary and health needs of individuals – food utilization.

Once food insecure areas are put on the map, WFP lays detailed plans to improve the livelihoods of the people who live in those areas.

To summarize

Food for Education (FFE) programmes *should be considered where education indicators are poor, the prevalence of nutritional deficiencies and temporary hunger is high, and other indicators confirm poor availability and access to food.* It is important to involve local communities in the operation of a FFE activity and make them aware of its role and benefits. FFE activities lend themselves well as a vehicle for stimulating community involvement in education.

In order to maximize the benefits of FFE programmes, priority should be given to their integration into comprehensive school education and health interventions. Where the emphasis is mostly on increasing access to schools, with no nutritional problems to be addressed, food could be provided as take-home rations, eliminating the need for cooking and food distribution at school level. *A careful case-by-case assessment of needs should always precede the decision on priority of objectives and possible interventions.*

Appendix I

Final programme for the Seminar

Tuesday, 5 November 2002

09.00-09.45 am	**Registration**
10.00-10.30 am	***Session 1:* Official Opening** Opening remarks by Khun Savitri Suwansathit, Secretary General, Thailand National Commission for UNESCO. Opening remarks by Mr Sheldon Shaeffer, Director, UNESCO, Bangkok and UNESCO Asia Pacific Regional Bureau for Education. Opening remarks by Mr Changchui He, Regional Representative, FAO Regional Office, Bangkok.
10.30-11.00 am	***Break***
11.00-12.30 pm	***Session 2:* Introduction to the discussion** Chair: Sheldon Shaeffer (UNESCO, Bangkok) Presentation of the workshop rationale, objectives, programme: Lavinia Gasperini (FAO, Rome), Overview and main findings of the FAO-UNESCO/IIEP study: David Atchoarena (IIEP, Paris)
12.30-02.00 pm	***Lunch break***
02.00-03.30 pm	***Session 3:* EFA: addressing the rural challenge** (panel discussion) Chair: Hameed A. Hakeem (UNESCO Bangkok) Panelists: Sheldon Shaeffer (UNESCO, Bangkok), Vibeke Jensen, UNESCO, Bangkok) Ouam Sengchandavong (Lao PDR)
03.30-04.00 pm	***Break***

04.00-05.30 pm	***Session 4:* Enhancing food security through education and training** (panel discussion) Chair: Malcolm Hazelmam (FAO, Bangkok) Panelists: Biplab K Nandi (FAO, Bangkok), Anette Haller (WFP), Nanthaporn Viranwathana (Princess Maha Chakri Sirindhorn Project), Samuel Mancebo, (APEAN)

Wednesday, 6 November 2002

09.00-10.30 am	***Session 5:* Targeting rural poverty: the role of education** (panel discussion) Chair: K.C. Katyal (India) Panelists: Chris Spohr (ADB), Kiran Pyakuryal (ESCAP), Yu Fuzeng (China), Pensri Ratana (Ubonratchathaanee Province, Thailand)
10.30-11.00 am	***Break***
11.00-12.30 pm	***Session 6:* Responding to the transformation of rural labour markets: implications for education and training** (panel discussion) Chair: David Atchoarena (IIEP, Paris) Panelists: Samuel Mancebo (APEAN), Tom Vandenbosch (Farmers of the Future), Sombath Somphone (Participatory Development Training Centre)
12.30-02.00 pm	*Lunch break*
02.00-03.30 pm	***Session 7:* Group work:**
	Group 1*:* **Local development and community participation in rural areas: experiences in education** Facilitator: Dato Sofian Mohamed Salleh (Malaysia) Rapporteur: Tom Vandenbosch (Farmers of the Future)

Group 2:
How can the education and agriculture sectors better work together? Experiences in multi-sectoral coordination and programmes
Facilitator: Cely Binoya (PASSAGE)
Rapporteur: Sombath Somphone (Participatory Development Training Centre)

Group 3:
Re-engineering institutions of higher and vocational education: approaches to institutional change
Facilitator: David Acker (Iowa State University)
Rapporteur: Ir. Harris Iskandar (Indonesia)

03.30 - 04.00 pm *Break*

04.00 - 05.30 pm ***Session 8*** **– Group work (continued)**

Thursday 7, November 2002

09.00 – 10.30 am ***Session 9:*** **Special focus on HIV/AIDS: Enhancing preventive/inclusive education in rural areas to meet the impact of HIV/AIDS** (Part I)
Chair: Owen Wrigley HIV/AIDS Consultant, Yangon, Myanmar
Introduction: Owen Wrigley,
Presentation of a film showing the vulnerability to HIV resulting from lack of education and citizenship, and lack of vulnerability reducing interventions: Yindee Lertcharoenchok, UNESCO Bangkok
Presentation of findings of a study in Northern Thailand related to preventive education responses in rural areas: Kreangkrai Chaimuangdee *et al.* (Thai Lifeskills Development Foundation)

10.30-11.00 am *Break*

1100 – 12.30 pm	***Session 9*** **(continued)** (Part II panel discussion) Panelists: Lee Nah Hsu (UNDP, SEAHIV), Anette Haller (WFP), Wassana Im-Em (Mahidol University, Thailand), Kriangkrai Chaimuangde (Thai Lifeskills Development Foundation)
12.30 – 02.00 pm	***Lunch***
02.00 – 03.00 pm	***Session 10:*** **Presentations of group work in plenary and discussion** Chair: Lavinia Gasperini (FAO, Rome)
03.00 – 03.30 pm	***Session 11:*** **Presentation of the Flagship on Education for Rural People** Lavinia Gasperini (FAO, Rome)
03.30 – 04.00 pm	***Break***
04.00 – 05.00 pm	***Session 12:*** **Final discussion: lessons and follow-up** Chair: Malcolm Hazelman (FAO, Bangkok)
05.00 – 05.30 pm	**Closing remarks** David Atchoarena (IIEP, Paris), Lavinia Gasperini (FAO, Rome), Hameed A. Hakeem (UNESCO, Bangkok)

Appendix II

List of participants attending the Seminar

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Appendix III

List of papers prepared for Panel Presentations and Group Work

Plenary sessions

Title of Papers	Presenter
Education for rural development: main findings of the FAO/IIEP study	David Atchoarena, IIEP and Lavinia Gasperini FAO
The Role of UNESCO in the Asia-Pacific Region	Sheldon Shaeffer, Director, UNESCO Bangkok
The Dakar Framework for Action: Education for All and Education for Rural Development	Sheldon Shaeffer, Director, UNESCO Bangkok
Education for Rural Development in Asia: Experiences and policy lessons: EFA: Rural challenges in Lao PDR	Ouam Sengchandavong, Deputy Director-General, Department of Planning and Cooperation, Ministry of Education, Lao PDR
Food for education and rural development	Anette Haller, WFP Regional Bureau for Asia, Bangkok
Enhancing food security through education and training	Samuel T. Mancebo, President Asia Pacific Association of Educators in Agriculture and Environment (APEAN)
Contributions of education to alleviating rural poverty	Yu Fuzeng, Advisor to INRULED, PR China
Supporting rural education for poverty reduction: issues and approaches	Chris A. Spohr, Project Economist, Social Sectors Div. East and Central Asia, ADB

Enhancing food security through education and training	Biplab K. Nandi, Senior Food and Nutrition Officer, FAO, Regional Office for Asia and the Pacific, Bangkok
Responding to the transformation of rural labor markets: implications for education and training	Samuel T. Mancebo, President Asia Pacific Association of Educators in Agriculture and Environment (APEAN)
Landcare in the Philippines: developing capacities for Farmers of the Future and their communities	Tom E. Vandenbosch, Project Leader, Farmers of the Future
Transformation of rural labour markets: implications for education and training	Sombath Somphone, Director, Participatory Development Training Centre (PADETC), Lao PDR
Launching a new Flagship: Education for Rural People (ERP)	Lavinia Gasperini, Education for Rural Development, FAO
Improving education practices and strengthening multisectoral efforts to enhance the responses to HIV/AIDS	Kreangkrai Chaimuangdee (et al.), Director, The Life Skills Development Foundation, Northern Thailand, Chiang Mai
Preventive education and multisectoral partnerships in rural areas: an introduction	Owen Wrigley, HIV/AIDS Consultant, Yangon, Myanmar
Presentation of a film showing vulnerability to HIV resulting from lack of education and lack of vulnerability reducing interventions	Yindee Lertcharoenchok, Culture Unit, UNESCO, Bangkok
Policy implications of and lessons learned from the UNDP Farmer Schools Project in Cambodia	Lee-Nah Hsu, Manager, UNDP South-East Asia HIV & Development Project, UNDP-SEAHIV, Bangkok
Findings of the regional HIV/AIDS mission to the Mekong region	Annette Haller, WFP, Bangkok

Title of Papers	Presenter
Community and farmer participation for agricultural development in Malaysia – some issues on education	Dato' Sofian Mohd. Salleh, Director, Human Resource Development Division, Department of Agriculture, Malaysia
Major activities and strategic prospects of farmer's technical education in China	Zhang Jinglin, Division of Rural Education Department of Science, Technology, and Education, Ministry of Agriculture, PR China
Re-engineering institutions for teacher education	George R. Garma, CESO IV. Philippines
Training Services Enhancement Project for Rural Life Improvement (TSER-RLI)	Asterio P. Saliot, MNSA, IV, Philippines
Higher agricultural education in India – status and changes	J.C. Katyal, Deputy Director General, Education, ICAR, India
Re-engineering institutions of higher and vocational education: approaches to institutional change	Santiago M. Yabut Jr., Deputy Director General, Technical Education and Skills Development Authority (TESDA), Philippines
Re-engineering institutions of higher and vocational education to enhance development of agribusiness and agricultural human resources – Indonesian case study	Safuan Tingal, Director, Centre for Agricultural Education Development Agency for Agriculture Human Resources Development, Ministry of Agriculture, Indonesia
Servicing rural development: an important function of education – China's experiences	Liu Jiantong, Director, Comprehensive Division, Department of Vocational and Adult Education, Ministry of Education, PR China
Facts on rural education in Indonesia	Ekodjatmiko Sukarso, Directorate for Community Education, Ministry of National Education, Indonesia
Education for rural poverty alleviation: the Chinese case	Li Xiaoping INRULED PR China

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